

लाल बहादुर शास्त्री राष्ट्रीय प्रशासन अकादमी
L.B.S. National Academy of Administration

मसूरी
MUSSOORIE
पुस्तकालय
LIBRARY

अवधि संख्या

Accession No.

7170

वर्ग संख्या

Class No.

332.1

पुस्तक संख्या

Book No.

Say
C-2

332.

Say,

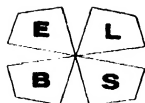
MODERN BANKING

BY

R. S. SAYERS

SIR ERNEST CASSEL PROFESSOR OF ECONOMICS
IN THE UNIVERSITY OF LONDON

FIFTH EDITION



THE ENGLISH LANGUAGE BOOK SOCIETY

and

OXFORD UNIVERSITY PRESS .

Oxford University Press, Amen House, London E.C.4

GLASGOW NEW YORK TORONTO MELBOURNE WELLINGTON

BOMBAY CALCUTTA MADRAS KARACHI LAHORE DACCA

CAPE TOWN SALISBURY NAIROBI IBADAN ACCRA

KUALA LUMPUR HONG KONG

© *Oxford University Press 1960*

FIRST EDITION 1938

REPRINTED 1939, 1941, 1943, 1944, 1945

SECOND EDITION 1947

REPRINTED 1947, 1948

THIRD EDITION 1951

REPRINTED LITHOGRAPHICALLY IN GREAT BRITAIN

AT THE UNIVERSITY PRESS, OXFORD

FROM CORRECTED SHEETS OF THE THIRD EDITION

1952, 1953, 1954

FOURTH EDITION 1958

FIFTH EDITION 1960

REPRINTED LITHOGRAPHICALLY 1961, 1963

PREFACE TO THE FIFTH EDITION

THE present edition follows hard on the heels of the fourth edition, mainly because the work of the Radcliffe Committee has changed the needs of students and other readers. It is possible that a radical reconstruction of the book will be desirable when time has allowed the full repercussions of the Radcliffe Report to be seen, but if examination candidates in 1960 and 1961 were to be helped, a less ambitious revision had to be undertaken at once. In making this revision, I have had it in mind that this book should be read before rather than after the reader turns to the Radcliffe Report.

The principal changes are in Chapters 1, 4, 5, 6, and 12. In successive editions a number of minor changes in Chapter 1 have cumulatively altered its tone, and this process has been taken much further in this latest revision. Chapters 4 and 5 have been substantially reconstructed, to reflect the view of English central banking adopted by the Radcliffe Committee. Its Report has made the speculative concluding Chapter (12) of the fourth edition unnecessary, and I have replaced it by a brief guide to the Committee's Report and Evidence. The moves towards convertibility of the pound have made possible a great simplification of Chapter 6.

R. S. S.

London School of Economics
January 1960

CONTENTS

I. INTRODUCTORY

- | | |
|---|----|
| I. <i>The Supply of Money and the Price Level</i> | I |
| II. <i>The Sources of Money Supplies</i> | 8 |
| III. <i>The Process of Creation of Money</i> | 11 |

2. COMMERCIAL BANKING

- | | |
|--|----|
| I. <i>Structural Questions</i> | 20 |
| II. <i>The Bankers' Clearing House</i> | 27 |
| III. <i>The General Control of Banks over Deposits</i> | 30 |

3. THE DISCOUNT MARKET

- | | |
|---|----|
| I. <i>The Bill of Exchange</i> | 42 |
| II. <i>The Structure of the Discount Market and its Traditional Functions</i> | 45 |
| III. <i>The Treasury Bill</i> | 52 |
| IV. <i>Short Bonds, and the Present Position of the Discount Market</i> | 56 |

4. CENTRAL BANKING: CONSTITUTIONAL QUESTIONS

- | | |
|--|----|
| I. <i>The Central Bank as an Organ of Government</i> | 64 |
| II. <i>The Bank of England</i> | 66 |
| III. <i>The American and other Central Banks</i> | 72 |

5. THE DOMESTIC OPERATIONS OF THE CENTRAL BANK

- | | |
|--|-----|
| I. <i>The Bank of England as the Central Bank</i> | 77 |
| II. <i>The Bank of England as the Source of Cash</i> | 80 |
| III. <i>The Regulation of the Note-issue</i> | 91 |
| IV. <i>The Bank of England as Lender of Last Resort</i> | 96 |
| V. <i>The Bank of England's Other Open-market Operations</i> | 106 |

6. EXTERNAL TRANSACTIONS AND THE BANKING SYSTEM

- | | |
|--|-----|
| I. <i>External Payments and Receipts</i> | 113 |
| II. <i>The Sterling Area</i> | 117 |

III. <i>Transactions outside the Sterling Area: the Exchange Equalization Account</i>	128
7. THE RATE OF INTEREST, THE SUPPLY OF LOAN-ABLE FUNDS, AND ECONOMIC ACTIVITY	
I. <i>Short-term Rates of Interest and the Holding of Goods</i>	136
II. <i>The Connexion between Short-term and Long-term Interest Rates</i>	139
III. <i>Long-term Rates of Interest, the Availability of Capital Funds, and Investments in Fixed Capital</i>	146
8. COMMERCIAL BANK LIQUIDITY AND LENDING POLICY	
I. <i>Economic Significance of the Distribution of Assets</i>	157
II. <i>The 'Liquidity' of Bankers' Assets</i>	158
III. <i>The Attractions of Self-liquidating Paper</i>	164
IV. <i>Some International Comparisons</i>	168
V. <i>Changes in the Demand for Bank Loans</i>	176
9. THE TECHNIQUE OF MONETARY POLICY IN ENGLAND	
I. <i>The Objectives of Monetary Policy</i>	182
II. <i>Control of the Volume of Bank Deposits</i>	184
III. <i>The Structure of Interest Rates</i>	201
IV. <i>Selective Credit Control</i>	218
10. BANKING AND MONETARY POLICY IN THE UNITED STATES: A COMPARATIVE STUDY	
I. <i>Commercial Banking</i>	225
II. <i>The New York Money-market</i>	234
III. <i>Control of the Quantity and Price of Credit</i>	239
11. BANKING IN THE NEW COUNTRIES	
I. <i>The Significant Peculiarities of Newer Banking Systems</i>	249
II. <i>Central Banking in the Absence of a Short-money Market</i>	253
III. <i>Central Banking in an Undeveloped Banking System</i>	264
12. THE RADCLIFFE REPORT	269
APPENDIX. <i>The London Bankers' Clearing House</i>	279
INDEX	289

I

INTRODUCTORY

1. *The Supply of Money and the Price Level*

FOR many decades banks have been recognized as traders in money. Were this their sole function economists would undoubtedly be interested in them; just as economists are interested in the activities of the issuing houses or any other section of the capital market. The linking of borrower and lender influences the distribution of spending power, transferring it from people who have less immediate inclination to spend, and into the hands of people who are wanting to spend it immediately. Every 'financial intermediary' (or 'financial institution') engaged in this linking of lenders with borrowers is thus likely, by its behaviour, to have some influence on the total pressure of demand for goods and services. But among all the financial institutions—and they are many and varied—the banks have peculiar economic importance, and this importance is reflected in the more prominent place they have traditionally been given in economic studies. They are peculiarly powerful lenders, generally covering a wider part of the field than any others, because they are in an important sense manufacturers of money.

Perhaps we ought to be quite clear what we mean by 'money' and why we interest ourselves so much in the behaviour of money. Money is something that is widely accepted for the settlement of debts.¹ It is not of any direct use for the actual 'consumption' that is the ultimate end of all economic activity, nor is it of direct use in the

¹ The word 'debt' covers all monetary transactions. If a child enters a shop to buy a pennyworth of sweets, he asks for the sweets, thereby incurring a debt of one penny, which is settled immediately by passing the coin across the counter.

process of producing consumption goods from other goods and services. But we can use money to buy goods and services, whether for immediate consumption or for use in the production of ultimately consumable goods. In a 'money economy' of the kind with which we are familiar the all-important process of producing goods for ultimate consumption is carried out at the direction of people who buy (with money) the original factors of production, put them together, and sell (for money) the goods produced. They are induced to undertake this process by the prospect of a money profit. The direction of the original factors of production into the fundamental processes of producing what we want to live on depends upon various flows of money. An alteration in the flow of money implies an alteration in the flow of final goods and services. This is true whether the alteration takes the form of contraction or of expansion or of mere diversion of the flow of money. An expansion of the supply of money never takes the form of everyone finding their money balances increased in identical proportions.¹ The increase in the supply of money is at the outset concentrated in a few particular channels, and the persons to whom it goes are thereby enabled to increase the share of the factors of production or of the produced goods at their disposal. Any person or institution with the power of regulating the supply of money has therefore great significance in the economic world.

The peculiar importance of banks, distinguishing them from other financial institutions (insurance companies, building societies, money-lenders, &c.) which also lend and borrow money, is derived from the fact that claims against them, called Bank Deposits, are themselves unmistakably money. People commonly do, by passing

¹ The opposite process—an 'overnight' reduction of all money balances—played an important part in the monetary reforms in certain European countries at the end of the Second World War, and its results provided illuminating evidence both of the limitations of the Quantity Theory and of the important truth it embodies.

cheques to each other, transfer the title to bank deposits—ownership of the bank deposit passes from the drawer to the drawee of the cheque. The deposits, when so transferred, are widely accepted in settlement of debts, and it is for this reason that, in accordance with the definition of money (given in the previous paragraph) we can label bank deposits ‘money’. Since we regard this as the most important distinguishing characteristic of a bank, we can define a bank as an institution whose debts (bank deposits) are widely accepted in settlement of other people’s debts to each other.¹ It follows that the amount of money in existence depends on the lending power of the banks. How this money—this purchasing power—is exercised will depend partly on how other financial intermediaries as well as the banks are channelling the money into the hands of would-be spenders, but clearly the role of the banks themselves is of critical importance in determining the supply of money.

As a preliminary justification of the study of banking, we can refer to the most elementary theory of the effects of changes in the supply of money—the theory known as the Quantity Theory of Money. It is stated in various forms, more or less rigorous. Sometimes it is said that changes in the supply of money tend to produce changes in the same direction in the general level of prices. The strictest version says that the value of money varies inversely, and the general level of prices directly, in proportion to changes in the supply of money. The first and vaguer form has the advantage of being more obviously

¹ These definitions are chosen because they appear to me to describe in simple terms the common practices of people in a modern community, but I must emphasize that the main conclusions of monetary analysis do not depend upon the precise definitions chosen. Readers already attuned to modern economic analysis may prefer to think of the infinite variety of assets as ranged in order of liquidity, with Bank Deposits at (or near) one extremity of the range. The economic significance of a change in the supply of money is based on the disturbance of the liquidity-distribution of the public’s assets, and such a disturbance occurs when Bank Deposits are changed, whether these Bank Deposits are or are not labelled ‘money’.

consistent with observed facts. The second and more rigorous form has the advantage of being the clear conclusion of a tidy and logical argument built on strictly limited assumptions.¹

✓The Quantity Theory is based on the fact that money is wanted not for its own sake but for the convenience of having ready command over objects of more direct service to us. The more money a person holds the greater is the convenience he enjoys (assuming, of course, that his money is in convenient forms—not a thousand pounds' worth of threepenny-bits!). But the holding of money implies the missing of an opportunity of increasing one's satisfactions of other kinds. For a person can use money either for expenditure on immediate consumption, from which immediate satisfaction is derived, or for acquiring an 'investment' (e.g. the ownership of capital goods) which will yield him further money income in the future—thus enabling him to increase his income of satisfactions at some future date. In deciding to secure the convenience of holding a money balance, a person is deciding to deny himself the alternative satisfactions he might have enjoyed. Individuals and corporations do, in fact, get into the habit of holding a certain average money balance, the size of which depends on the money volume of their transactions, their habits of payment, and similar factors. Given other things unchanged, an increase in a money balance above the habitual level (having regard to seasonal and similar considerations) will lead the holder of it to consider spending more on consumption or investing more.² Now

¹ The following paragraphs are not intended as an exhaustive analysis of the Quantity Theory. The reader should refer, for further discussion, to the standard works of Marshall (esp. *Official Papers*), Fisher (esp. *Purchasing Power of Money*), Keynes, and Robertson; the most satisfactory recent analysis is in D. Patinkin, *Money Interest and Prices* (Evanston and New York, 1956).

² From a realistic point of view it is worth envisaging the possibility of things working the other way round: an individual sees an opportunity for profitable spending and is thereby stimulated to get into debt to a bank—the bank offering its own indebtedness (deposits) in exchange.

if there is an increase in the aggregate supply of money, holders of excess balances must predominate over holders of uncomfortably low balances. Accordingly there will be a *general* disposition to spend more on consumption or on investments. Spending more on consumption means that there is an increase in the money demand for consumption goods. On ordinary supply-and-demand lines we expect some rise in the prices of consumption goods and a connected tendency, perhaps, of supplies to increase. An increased money demand for investments has not such obvious effects on the price level, but again there is a tendency for certain prices to rise. The initial effect may be simply that people try to buy more of old securities. These can, however, only be transferred. Their prices rise, and there is a better demand than before for securities newly issued by businesses wanting to extend their operations. As money for capital purposes can be obtained more easily, business men increase their money demand for raw materials and factors of production, and under this pressure of increased money demand for goods and services,¹ prices tend to rise and, if some resources had previously been unemployed, for output to expand. Whether the surplus money balances are directed towards consumption or investment, therefore, the effect of rising prices and, perhaps, of rising outputs tend to appear.

People cannot, as a whole, reduce their money balances. Individuals may pass them on; but the supply of money remains unchanged. But as prices rise, holders of balances have to revise their notions of what is a comfortable balance to hold. Prices have risen, so that their former average balances have become uncomfortably small relatively to their outgoings; if output has expanded, the enlarged volume of transactions will similarly increase the remainder of the analysis needs no modification to fit this case of money supply responding to changed demand.

¹ The connexion between the market for old securities and the entrepreneurs' demand for goods and services is unfortunately rather more complicated than this: the reader will find further elucidation in Chapter 7.

need for money balances. Accordingly, as prices rise and output expands, people cease to feel that their new high balances are unnecessarily large, and cease to increase their rate of expenditure (on consumption and investment). Prices therefore cease to rise.

The above argument can easily be adapted to describe the converse process. A reduction in the total supply of money implies uncomfortably low balances on the whole. Contraction of expenditure follows, prices fall, and as prices fall the new level of balances again becomes adequate and things can settle down at a new (lower) level of prices, and a new (lower) level of money balances. In short, given other conditions, there is to every level of money balances (i.e. to every supply of money) an appropriate general level of prices: increased supply of money tends to produce rising prices, decreased supply of money tends to produce falling prices. This Quantity Theory presumption holds good in whatever way the change in the supply of money comes about: for an increased supply of money must mean that on the average people have surplus balances and vice versa. The theory, in this form at least, is equally applicable to a private enterprise economy and to a 'planned economy' of the type towards which Britain has recently been moving.

Rising and falling prices have certain unfortunate effects. First, there are the *distributional* evils. Certain money incomes—those of judges, clergymen, rentiers—are fixed either by law or by custom, and other money incomes—those of civil servants and doctors, for example—are not changed at all rapidly as other prices change. The money incomes derived by charitable and educational institutions from their endowments are also substantially unresponsive to changing prices. All recipients of these stable incomes enjoy an increased real income as prices fall, and suffer a reduction as prices rise. On the other hand, business men (deriving their incomes from profits) and ordinary shareholders find their money incomes increasing

faster than prices are rising, since profits result when the costs, some of which are fixed by long contract, &c., have been deducted from the rising prices.¹ Wage-earners may lag behind rises in prices, or powerful trade unions may push them ahead of rising prices; and they may lag behind falling prices. If there were no adjustments, distributional injustices would clearly be serious; if there are adjustments, these are likely to be imperfect. These redistributions of real income can in no wise be imputed to varying deserts: there is clear injustice between the contrasting classes of income-receivers when prices are moving decidedly upwards or downwards.

Secondly, there are the evil effects of rising and falling prices on *production*. As certain costs, particularly the prices of certain factors of production, are fixed by long contract, by law, or by custom, the entrepreneur who is faced by falling prices finds that production is becoming unprofitable, and, after a point, decides to reduce his output. Economic activity and the level of employment for wage-earners therefore decline. Resources that might have been used to produce useful things stand idle, while individuals suffer the distresses occasioned by unemployment. This contraction of output is by no means evenly spread. For one of the first ways in which a business man is likely to curtail his operations is by cutting down any plant extensions and suspending replacement of worn-out plant. Accordingly the depression is likely to be particularly severe in the capital goods trades, and people attached to these trades suffer most. The change in activity in capital goods is likely to have a parallel in the industries making durable consumption goods such as cars, and household equipment, for the decline in employment and incomes in other industries will prompt consumers to postpone replacement of goods which can be made to

¹ During the Second World War the normal effect of rising prices on profits was largely stultified by the wide range of governmental contracting and by special taxation.

last a little longer. When prices are rising and the prospect of profit is improving, the opposite occurs: the industries making capital goods and those making durable consumption goods become more active. If the greater activity could be sustained, all would be well; but bitter experience leads us to expect that a slump—or at least a ‘recession’—follows a boom that has developed to any appreciable extent.

Rising prices and falling prices both, then, appear to have serious disadvantages; and changes in the supply of money appear to be among the possible causes of both. We must therefore find out who, in the modern world, regulates the supply of money, and on what principles their operations are based.

II. *The Sources of Money Supplies*

In the most advanced countries by far the greatest part of the supply of money consists of *Bank Deposits*, sometimes called ‘Bank Money’. The Bank Deposit is simply a debt of a bank to an individual or corporation. In exchange for certain rights (to which we shall return presently) the bank enters in its books so much ‘to the credit of’ Mr. So-and-so. The latter may then settle his debts to other people by making over to them parts of his ‘credit balance’ or bank deposit. Almost all large payments are made in this way, the instrument by which the deposit is transferred from one person to another being the familiar ‘cheque’. When one person pays another by cheque, what happens fundamentally is that the bank’s debt to the payer (or ‘drawer’) is reduced by the amount of the cheque, and the bank’s debt to the payee is increased by the same amount. The drawer has made over to the payee his claim against the bank. It is by circulating the debts of the banks (the credit balances of the public at the banks) in this way that most transactions are settled.

Generally, when the bank makes an entry of I O U in favour of a person, the transaction remains simply a book

entry. The bank in its own books stands indebted to Mr. So-and-so to the amount given. That is the pure Bank Deposit. But sometimes Mr. So-and-so wants evidence of the debt in a different and more readily transferable form. In this event the bank enters the amount, not in favour of Mr. So-and-so specifically, but in favour of 'Bearer'. It then tears the page out and hands it to Mr. So-and-so, who becomes the first 'Bearer'. He, however, can readily pass it on, passing on, in fact, the claim against the bank without the bank having to record the transaction in its books. When this is done the page torn out of the bank's ledger is called a *Bank Note*. A Bank Note is thus neither more nor less than visible evidence of a bank's debt, which can be passed round from hand to hand in settlement of all sorts of individual debts. This form of bank money has its advantages and disadvantages for both parties. To the banker, the note system has the advantage that he does not have to bother about entering the transfers from one individual to another. To the individual the note form has the advantage that he does not have, every time he makes a payment, to produce evidence that he has a bank deposit on which to draw. Cheque payments are convenient enough, but one is unwilling to accept a cheque in settlement of a debt unless one is reasonably sure that the drawer has a genuine deposit on which to draw. The bank deposit is very widely accepted in settlement of debts, but the individual cheque is accepted only when the payee is satisfied that there is a bank deposit behind it.¹ On the other hand, to the banker the note form has the disadvantage that he must take greater precautions against forgery. Forgery of book entries can be prevented by checking the honesty of clerks in the bank's employment; but prevention of forgery of bank

¹ This distinction is sufficient to justify describing bank deposits as money, while denying that cheques are money. The 'money' is the bank deposit—the cheque is merely the legal instrument by which the deposit is transferred from one name to another.

notes involves careful designing and choice of paper and a host of other precautions. To the individual the note form has, first, the disadvantage that the amount of the note—a round sum such as one dollar, one pound, or ten shillings—very frequently does not coincide with the amount of the debt he wishes to settle. Secondly, it has the disadvantage that the notes are as valuable to other people as they are to himself, whereas his cheque-book is, broadly speaking, of value only to himself. Consequently, the settlement of debts by the payment of notes involves carrying about pieces of paper that other people have the incentive to steal, whereas settlement of debt by cheque is quite a safe procedure. If a man wishes to settle a debt of, say, £3. 10s. he can pay by cheque (provided that his creditor has confidence in the existence of the debtor's claim on the bank), which merely involves carrying a cheque-book and filling a single cheque form. Or he can pay it in notes, which means that he must carry with him four separate pieces of paper (three one-pound notes and one ten-shilling note) all or any of which he may lose without much chance of recovery.

The Government may by law restrict to one or a number of banks the issue of notes. Practice in this respect varies from country to country, and is largely the outcome of historical accident; but there has been a general disposition to restrict note-issuing powers more and more, as a result of the spreading notion that the supply of money must be controlled by the State. In England note-issuing powers are now restricted to the Bank of England, but in Scotland a few other banks have strictly limited rights of issue. The State also sometimes says that certain notes shall be 'legal tender'. Money of any kind is 'legal tender' if the offer of it, in the exact sum, in settlement of a debt leaves the creditor no option but to discharge the debt. If a debtor offers non-legal tender money the creditor may decline to accept it without modifying his legal claim against the debtor. Bank deposits have never been

constituted legal tender, but throughout the United Kingdom Bank of England notes are legal tender.¹

In addition to money created by the banks there is money created by the State. This is sometimes in the form of notes, which are to all intents and purposes like bank notes, but derive their acceptability not from their being a claim against a bank but simply from a decree of the State that they shall be legal tender. Such were the one-pound and ten-shilling Treasury Notes which circulated in England during the years 1914–28. More generally the State issues metallic coins of small denominations, such as one shilling, one penny, three-pence, twenty-five centimes, ten cents, &c., which are legal tender for payment of small debts only, and which the public uses for convenience in paying small sums and odd amounts as supplements to note payments.

The supply of money thus depends directly on these two sources—the banks and the State. Only in most extraordinary circumstances—such as the 1923 inflation crisis in Germany—is any other body able to create money.² If we want to know how the supply of money is controlled we must seek the motives that guide the banks and the State. In this chapter only certain very general points will be covered. The entire technique of monetary control will only become apparent as the book proceeds.

III. *The Process of Creation of Money*

Before examining the process of money-creation let us consider the relative amounts of money from the two

¹ The large notes (£5) are legal tender in England and Wales only.

² An important qualification, arising from the nature of money, is ignored in this paragraph. Since money depends on its general acceptability, the public can, by a change of habits, impute 'the money quality' to classes of assets that had previously been only 'near-money'. These changes of habit, and the consequent changes in the scope of money and in the public interest in the behaviour of various financial institutions, are of importance if a very long period is in view, and they occasionally become important even for short-term policy.

main sources. For Great Britain the approximate figures for May 1959 were:

	£ millions
Bank deposits (including Public Deposits and Other Accounts at the Bank of England)	6,372
Bank notes in circulation*	2,076
Coin ('State Money')*	184
Total	<u>8,632</u>

* Including notes and coin held in commercial banks.

These are only round figures, but the import of them is clear enough—Bank Money forms a large proportion of the total supply of money. In the United States also, Bank Money is predominant; in most Continental countries this is also true, although there the Bank Money is more largely in the Note than in the Deposit form.

Restricting ourselves for the time being to the operations of the ordinary joint-stock banks, we have to face the question, what induces the banks to get into debt to the public to these enormous amounts? The banks have voluntarily entered in their books I O U's to all sorts of people, to an aggregate running into thousands of millions of pounds. What has induced them to do so? They are profit-seeking corporations. They are induced to become debtors to other people by these others offering in exchange certain claims that equal the capital value of the bank's liability and bear interest. It is from the interest payment on these claims that the bank derives its income. Provided that it is successfully managed, the bank's assets always equal its liabilities. The bank deposits—i.e. the debts of the bank to the public—are always covered by the assets people have offered to the bank in exchange for deposit claims against the bank. The process of 'creation' of bank deposits is essentially an exchange of claims. The member of the public offers a claim of some sort—such as legal tender State money, or a government bond, or a mere promise—and the bank offers a book debt called a

bank deposit. The economic significance of this exchange of claims lies in the fact that the claim against the bank—a debt which did not previously exist—can be used as general purchasing power. It is *money*, whereas the debt against which it was exchanged is not money. The operation therefore adds to the total supply of money.¹

The standard assets of a commercial bank are overdrafts and loans, bills discounted, investments, and cash.²

The overdraft system of the banks is well known. In return for an undertaking on the client's part, an undertaking often reinforced by the handing over to the bank of some negotiable security of which the bank may dispose if the client fails to meet his obligations, the bank allows the client to 'overdraw' his account. That is to say, the client is allowed to draw cheques beyond the amount previously standing to his credit in the bank's books, up to the limit set in the overdraft arrangement. (This limit will be fixed after the banker has considered the client's needs and prospects of profit.) This overdraft facility is equivalent to a bank deposit in representing part of the supply of money with which individuals can buy goods and services, and it becomes part of the visible supply as the right to overdraw is exercised and other people (recipients of the borrower's cheques) acquire claims against the lending bank. These claims are money, because people are prepared to accept them in settlement of debts. The borrower undertakes that by the end of, say, three months he will have acquired from other people various kinds of money—State-issued money or claims against this and other banks—to the amount of his overdraft. These claims he hands over to the bank, thus paying off his accumulated

¹ Except, of course, in the case of legal tender state money being taken by the bank—in which case the public has merely altered the *form* of the money it holds.

² The following pages serve to introduce these standard assets and to explain how bank transactions in them affect the supply of money. More detailed discussion will be found in later chapters (particularly 2, 3, 8, and 9).

debt. In addition he is obliged to pay interest—i.e. he has to provide additional money, so much per cent. on his *overdraft, as a payment for the use of the money for the given period. This additional money (the interest charge) provides the bank with a large part of its living. As far as giving and receiving claims in loan and deposit transactions are concerned, it will, if everyone meets his obligations, finish 'all square'.* The income of the bank depends on the additional claims (the interest and other charges) it makes against people who incur debt to the bank, either directly by loan or overdraft arrangements, or indirectly when the bank acquires the claims from previous creditors of those people.

When the system by which banks lend to individuals and firms is not the overdraft system but the loan system, the process is even simpler in its effects on the supply of money. The borrowing client gives certain undertakings and also perhaps provides 'collateral security' to protect the bank. The bank at once places the sum of the loan to the credit of the client: its debts are increased by that amount, and, since its debts constitute money, the supply of money is increased by the amount. At the same time the assets of the bank have increased by the amount of the loan. Its liabilities and its assets have increased by equal amounts. Were the amount £1,000 and were this the sole operation of the bank the balance sheet would be:

<i>Liabilities</i>		<i>Assets</i>	
	£		£
Deposits (i.e. credit balances of clients)	1,000	Loans to clients	1,000

The gross income of the bank would be increased by whatever interest charge it made for the loan. Out of this gross income it might pay a lower rate of interest on clients' credit balances, and it would have to meet its costs of administration. Any remainder would be a net profit.

As the borrowing client pays away the £1,000 by cheques drawn in favour of other people, the liabilities of

the bank become liabilities not to that client but to the payees of the cheques. What happens next depends on what those payees choose to do with their claims against the bank.

An alternative procedure, which used to be very common but is now mainly confined to a few branches of overseas trade, is that in which the borrower finances himself by drawing a bill of exchange. The bill of exchange¹ is in effect a written promise to pay a sum at some future date, usually guaranteed by some reputable finance house.¹ Then a person with funds to spare can 'discount' the bill, which means he can pay a sum of money for it now, the sum being slightly less than the sum promised in the bill. When a bank discounts a bill of exchange it in fact acquires the bill as an asset, giving in exchange a deposit—i.e. incurring a debt to a client. Its liabilities and its assets are increased by the same amount. Its balance-sheet still balances; but its gross income is increased by the difference between the sum it pays for the bill and the sum which the bill says is payable at the named date ('maturity'). This difference is called the 'discount'.

Another way in which a bank may add to its debts is by the purchase of securities, such as government bonds. The bank pays for the bonds by a cheque on itself,² i.e. it gives a debt in exchange for the bonds that become part of its assets. The balance-sheet shows change on both sides:

<i>Liabilities</i>				<i>Assets</i>			
			£				£
Deposits (i.e. debts to clients)	.	..	.	Investments (Government bonds)	.	.	.
			1,000				1,000

¹ For detailed account of bills of exchange see Chapter 3.

² Or it may give a cheque on its balance with the central bank. The effect is precisely the same, for the payee at once exchanges this claim for one against his own bank (he pays the cheque into his account) and aggregate public claims against the banks are increased by the given sum. The settlement of any inter-bank indebtedness which may arise is discussed later.

The process is precisely the same when the bank acquires land or buildings for its offices.

A bank will also give a credit balance (i.e. incur a debt) to anybody who offers it a claim against another bank. This happens, for example, when Smith, who banks with Barclays, draws a cheque in favour of Jones, who pays it into his own account at the Midland. In that instance there has merely been a transfer of indebtedness between banks—no increase. The original balance-sheet positions of the two banks may be supposed to have been thus:

MIDLAND BANK				BARCLAYS BANK			
<i>Liabilities</i>		<i>Assets</i>		<i>Liabilities</i>		<i>Assets</i>	
	£		£		£		£
Deposits (Jones)	1,000	Bills discounted and investments, &c.	1,000	Deposits (Smith)	2,000	Loans, &c.	2,000

Smith then draws a cheque for £500 in favour of Jones who pays it into his own account. The immediate effect on the position of the two banks is shown below:

MIDLAND BANK							
<i>Liabilities</i>		<i>Assets</i>					
	£		£				£
Deposits (Jones)	1,500	Bills discounted and investments, &c.	1,000				
		Claims against other banks (Barclays)	500				
	<u>1,500</u>		<u>1,500</u>				
BARCLAYS BANK							
<i>Liabilities</i>		<i>Assets</i>					
	£		£				£
Deposits (Smith)	1,500	Loans, &c.	2,000				
Claims of other banks	500						
	<u>2,000</u>		<u>2,000</u>				

This will not be the final position, as Barclays and the Midland will settle their inter-bank indebtedness by some transfer of assets from Barclays to the Midland. Barclays'

assets will go down by £500 whilst the Midland's assets go up by £500. Which particular assets are transferred we shall see later. But it is clear that there has been no increase in the supply of money. All that has happened has been that the composition of the supply has changed, in that more of it is now Midland Bank debts and less is Barclays Bank debts, and, of course, the ownership of the money has passed from Smith to Jones. The banks are less in debt to Smith and more in debt to Jones than before. Jones has more purchasing power at his disposal than before, Smith has less. The aggregate supply of purchasing power is unchanged.

One very important kind of asset the banks may acquire in exchange for a deposit liability has not yet been mentioned. This is 'Cash'. Cash consists of State money (in Britain now only 'silver' and copper coin) and of liabilities of the central bank, or bankers' bank (in England, the Bank of England). The liabilities of the central bank may be either book liabilities—i.e. deposits with it—or bank notes. When a client 'pays in' a wad of notes and some odd silver and copper coins, say, £31. 71s. 9d. he acquires a deposit to that amount. The bank, that is to say, becomes indebted to the client to the amount of £31. 17s. 9d. Its balance-sheet will have the following items added:

<i>Liabilities</i>				<i>Assets</i>			
	£	s.	d.		£	s.	d.
Deposits	31	17	9	Cash in hand	31	17	9

When a client draws a cheque to 'self' and takes it to the bank for cash, or receives a cheque from someone else and goes to the bank to 'cash it', the process is precisely reversed—Deposits go down and Cash in hand goes down. As, for reasons we have seen above, individuals sometimes prefer to use cash and sometimes cheques, cash is continually crossing the bankers' counters. Retail tradesmen are continually paying it in (exchanging cash for bank deposits) and employers of labour and spenders of incomes paid by cheque are continually drawing out cash

(exchanging bank deposits for cash). Passing cash across a bank's counter is essentially changing one kind of money for another—the proximate result is no change in the aggregate supply of money in the hands of the public. That further results may follow any decided net change in its composition is shown below, in Chapter 2.

The book claims against the central bank, i.e. the deposits at the central bank, are another form of cash. Ignoring, for the time being, the fact that the central bank may act as banker to the Government and to other people, we consider solely the central bank's operations as bankers' bank. The other banks choose to hold deposits at the central bank because it is convenient to settle inter-bank indebtedness by transferring their deposits at one bank—the central bank. If, as we saw above might happen, one bank becomes indebted to another, the debt can be settled by a book entry at the central bank, the deposit there of the creditor bank (the Midland in our example) being raised and the deposit of the debtor bank (Barclays) being reduced. The aggregate debts of the central bank have not changed; but it now owes more than before to the Midland and less than before to Barclays.

As transactions between members of the public are always leading to a flux and reflux of cash to and from the banks, and to inter-bank indebtedness, every bank finds it essential to hold as part of its assets cash in hand (till money) and at the central bank (Bankers' Deposits). This cash holding is called the 'cash reserve', and we shall have much more to say about its significance in succeeding chapters. The cash reserve is, to the banker, less attractive than the other assets because it brings him no income. He is obliged to hold it owing to the monetary habits of the public and the structure of the banking system.¹ But once any important section of the public has developed the banking habit the cash reserve need not bear a high

¹ In some countries the obligation to hold a cash reserve is a legal obligation.

ratio to aggregate assets. Consequently, in the world as we know it, bankers have ample inducement to create debts to other people, and that means creating purchasing power.

It is important to remember that the banks put this newly created money into the hands not of everybody at once, but of those individuals who can offer to the bank the kind of asset the bank thinks attractive. The banks are important not only because they create money but also because they distribute that money into particular channels. In some way or other, therefore, the actions of the banks have to be consistent with both the total and the composition of the country's production of goods and services. Just how this consistency is achieved must be the most fundamental question on which an analysis of the banking system should throw light.

COMMERCIAL BANKING

I. *Structural Questions*

THE banking systems of different countries vary substantially from one another; but they have all been tending in the last few decades to gravitate towards 'central banking systems', the archetype of which is our own system. These systems fall into three parts: the central bank, the commercial banks, and other institutions whose main business is the borrowing and lending of money. The central banks are discussed in Chapters 4 and 5, the commercial banks in this chapter, and some of the most important other institutions in Chapter 3. Some overlapping is inevitable.

The distinction between central and commercial banks turns essentially on their objects. 'The commercial bank thinks primarily of profit-making, whereas the central bank thinks of the effects of its operations on the working of the economic system. If the commercial bank is taking a sufficiently long view it will forgo some immediate profits for the sake of stability; but it is competing with other banks and cannot afford degrees of far-sightedness and altruism far beyond those of its competitors. It has its shareholders and must do the best it can for them. The central bank, on the other hand, is usually owned by the Government. A few of the central banks in the world have some shareholders, to whom it is expected to pay a dividend after paying all its expenses; but though cases have existed of central banks altering their course in order to avoid a loss of income, this is a departure from central banking principles. The commercial banks may be few or many. They trade with the general public.

There is only one central bank in each country, and it does little, if any, ordinary banking business for the general public: it restricts itself in the main to controlling the operations of the rest of the banking system.

In England we generally refer to our own commercial banks as 'joint-stock banks' and if, in writing of the English system, we use the term 'joint-stock banks' this must be considered interchangeable with 'commercial banks'. In writing of the United States it is not uncommon to refer to the commercial banks as 'member banks'. This is not strictly correct, for many commercial banks (some of the 'State banks'—banks registered under State, as opposed to federal, laws) are not member banks; but in many ways the operations of non-member banks and those of member banks are subject to the same influences, and for this reason confusion of the two categories is often pardonable enough. For the Continental commercial banks the term 'credit banks' is often used, in distinction to the investment banks, though the distinction between these two types of institutions is often in practice blurred.

Now that the joint-stock company system has for long been firmly established in almost every country of importance, the typical commercial bank in most countries is a very large institution having a large number of branches scattered all over the country, or at any rate over a large section of it. This is the 'branch-banking' type, the best examples of which are perhaps those of England, Canada, and Australia. In England, for example, a very large proportion of all the banking business is done by the 'Big Five'—the Midland, the Westminster, Barclays, Lloyds, and the National Provincial, most of the remainder being done by the smaller branch systems of Martins and the District. Though recently moving towards a system of the English type, banking in the United States is still predominantly of the opposite and original type—the 'unit banking' system.¹ In this system the bank's operations are

¹ For a brief account of the U.S.A. banking system see Chapter 10.

confined in general to a single office, though some few are allowed to have branches within a strictly limited area. This legal restriction of the area of operations of an American bank is the outcome of the traditional fear of a 'Money Trust', and particularly the suspicion with which the operations of the New York financiers are viewed in the Middle and Far West. (Even central banking in the United States has been affected by this powerful historical force; the central bank of the United States is a federation of twelve banks, each with its own region.) Like the unit banks in the mid-nineteenth-century English banking system, the unit banks of America are linked together by the 'correspondent bank' system. A country bank deposits some of its cash reserves with a bank in the nearest big city, and those bigger banks themselves send funds to the great centres of New York and Chicago. Remittances of funds from one part of the country to another can be made through the 'correspondent banks'—i.e. by transference of these funds in the great centres from the name of one country bank to that of another country bank. Corresponding banks often have standing arrangements for consultation on lending risks, and even for sharing loan business with each other. By arrangements of these various kinds the unit banks in a correspondent bank system are enabled to enjoy some of the advantages of a branch banking system. In comparing branch banking with unit banking we must accordingly remember that unit banks are not entirely independent of each other but are connected by the correspondent links.

Before discussing the comparative advantages and disadvantages of unit banks and branch banks, it is necessary to summarize the functions of commercial banks. Commercial banks carry on 'ordinary banking business' with the general public. What is 'ordinary banking business'? These banks have actually developed various miscellaneous services, such as executor and trustee services; but it is not these purely ancillary functions of which we are thinking

when we write of 'ordinary banking business'. Ordinary banking business consists of changing cash for bank deposits and bank deposits for cash; transferring bank deposits from one person or corporation to another; giving bank deposits in exchange for bills of exchange, government bonds, the secured (or unsecured) promises of business men to repay, &c.

The 'bank deposits' are merely I O U's written in the books of the banks, and, as we have seen in Chapter 1, their significance is derived from their general acceptability as money. The acceptability as money of deposits in a particular bank depends on complete confidence in the ability of that bank to exchange its promises (deposits) for other forms of money (directly or indirectly cash) on demand. This is what is meant when it is said that a bank must be *liquid*. 'Liquidity' generally means capacity to produce cash on demand for deposits.¹ A bank must therefore so conduct its business as to maintain liquidity. The lower the cost of maintaining liquidity the more efficient is the bank. Except by transferring its earning assets (bills of exchange, loans, &c.) to other banks an individual bank can only maintain liquidity by holding an adequate 'reserve' of cash—cash being unfortunately an asset that brings no income to the bank. The more readily transferable are its earning assets, therefore, the lower the barren reserve that must be held—and accordingly the lower is the cost to the bank of maintaining liquidity. The form of bank in which earning assets are most readily transferable is, therefore, *ceteris paribus*, the most efficient form. The necessity of maintaining liquidity also implies that a bank must, in order to maintain its position as a bank, avoid losses—for incurring losses means depreciating assets, and that cannot go on for ever without destruction of public confidence, which implies destruction of the general acceptability of deposits at the bank concerned.

In comparing the merits and demerits of unit and branch

¹ For further observations on the concept of Liquidity see Chapter 8.

banking, it is necessary to bear in mind these functions of the banks and these liquidity considerations which affect the success of their business.¹ A comparison between unit banking and branch banking is essentially a comparison between small-scale and large-scale operation. The large concern—the branch bank—secures certain economies of large-scale production, which are, however, limited by the nature of the market for the services of bankers. The branch bank enjoys the advantages of division of labour: some of its more able employees can devote their whole time to the broader problems of bank management, such as the distribution of assets, the rules to be applied to collateral security offered by business men seeking loans, and the recruitment of staff. In more lowly work in the banks the possibility of pushing the principle of division of labour very far is limited by the fact that operations are necessarily divided between branches, though some of the latest developments in mechanical accounting allow some centralization of work. The economy of reserves is of enormous importance for, as we have seen above, the maintenance of adequate reserves is absolutely vital to the banker. The large bank can afford to hold a lower cash reserve in each office, for one office can draw on another—by transferring assets or by borrowing—far more readily than can one unit bank draw on another unit bank in the same way. The system of correspondent banks modifies the disadvantage here of the unit bank, but only slightly, for deposits with a correspondent bank are relatively unremunerative. The cheapness of doing remittance business (the sending of money from one place to another for clients) is much increased by the conveniences of the branch system, for inter-office indebtedness can be far more easily adjusted. The correspondent system

¹ The comparison made in this chapter is solely concerned with the relative efficiency of the two methods of organization of *commercial* banking as such. An exhaustive discussion of the subject would have to take into account also the implications for central bank control; some aspects of this are discussed in Chapters 5, 9, and 10 below.

enables the unit bank to offer the customer service comparable with that afforded by the branch bank but not so cheaply.

The spreading of risks geographically is an advantage of the branch banking system. It is true that there are times of universal good trade and times of universal bad trade. If general depression of industry were the only cause of business losses, there would be little to choose between unit banks and branch banks—for all the branches of the latter would be losing at once. Even then the unit bank system would, however, be at some disadvantage, for industries making the more durable goods frequently suffer most in the depression, and they may well be strongly localized—thus upsetting banks whose activities are confined to particular areas. But in addition to cyclical and other widespread depressions of trade, particular industries are subject to secular rises and declines (which are occasionally sharp) as a result of changes in taste, changes in technique, &c. In so far as declining industries are strongly localized, unit banks depending on these areas may incur severe losses and actual collapse may follow, whereas the losses incurred by branch banks in depressed areas may be offset by profits earned by branches of the same banks in more prosperous areas. For example, the chronic depression of sections of American agriculture even before 1929 was one of the causes of the hundreds and hundreds of small bank failures that seemed so incompatible with the general prosperity of the United States at that time. In the same years the English branch banks were incurring heavy losses in the Lancashire cotton industry but, thanks to their other business in more prosperous parts of the country, their cotton losses were not of sufficient weight to break the English banks. If, in the inter-war period, we had had unit banks confined to the depressed areas it is inconceivable that the English banking system as a whole could have avoided serious internal crisis.

So far the advantages have weighed heavily in favour of

the branch banking system. But we must recall here Adam Smith's celebrated dictum, 'The division of labour is limited by the extent of the market'. The market for the services of a particular bank is not necessarily limited by national frontiers; but there are substantial disadvantages once the frontier is crossed. Not only are language and monetary units different, but also commercial law and trade customs vary greatly from one country to another, and for these reasons banks generally do well to confine their main operations to one country. Where they have overseas business it is generally conducted by subsidiary companies having more or less independent managements; more generally, banking business *between* countries is in the hands of specialist 'overseas banks'.

Within a country it is often suggested that market conditions are in fact so localized that unit banks are more useful than branch banks. It is said in particular that the local banker will have direct personal knowledge of the local business men, and will know which of them have, and which have not, the aptitude for business and the soundness of moral principles desirable in a borrower. The old English private banker, it was sometimes argued, knew all the family histories and would know therefore which young business men were worthy of assistance. Against this it may be suggested that the argument works in the opposite direction: family history is not an invariably good guide to credit-worthiness, and the individual banker may have been too unwilling to refuse a loan to the incompetent or dishonest scion of a family with which his father and grandfather had been on intimate social terms. The English branch banks of today have perhaps learned to get the best of both worlds in this matter. They encourage their employees to mix with the local customers on the golf course, and select and pay them accordingly. The local manager may then acquire personal knowledge, approaching that of the old individual banker, of his customers and their families. At the same time the remoteness of Head

Office and the local manager's subjection thereto enables him, when he has to refuse a loan, to do so without the social awkwardness that might arise if he took sole responsibility for the decision. The local manager can always place his personal knowledge of a customer at the disposal of Head Office, and, if there is occasion to refuse a loan, he can always thrust the unpleasant onus on to that remote abstraction 'Head Office' without jeopardizing his social contacts with the customer.¹

The advantages are thus overwhelmingly in favour of the branch banking system, and the more primitive banking systems of the world are therefore likely to develop in that direction. In the United States the normal course of development has been impeded by legal restriction and political prejudice. Over the rest of the world development of banking systems appears to be bringing them more and more closely in line with the structure of commercial banking that exists in England and the Dominions. There is accordingly some justification for treating this structure as the general case, giving separate attention to the American system as something exceptional.

II. *The Bankers' Clearing House*

Among the functions of commercial banks enumerated above there was an item, the transfer of bank deposits from one person to another. If there is a system of branch banking the transfer of a deposit of a Mr. A in London to the account of Mr. B in the Oxford branch of the same bank is simple enough: the entire transaction is internal to the bank concerned. A system of unit but corresponding

¹ I should perhaps add that the ideal branch manager will leave his client neither with the impression that he (the manager) has himself been so odious as to refuse the advance, nor with the impression that it is useless to talk to the local manager when the advance will in the end be refused by a remote and unsympathetic Head Office. Rather the local manager should persuade the customer that his projected enterprise (occasioning the request for a loan) is too risky and that the whole matter should, in the customer's own interest, be dropped.

banks manages to achieve almost as great simplicity—provided, of course, that the banks in the two places are corresponding banks. But when the debtor and creditor—the drawer and the payee of the cheque—bank with unconnected banks this simplicity disappears. When A, who banks with Barclays, writes a cheque in favour of B, who banks with the Midland, how is the deposit actually transferred from one to the other?

The connexion between the two banks is made by the *Bankers' Clearing House*. The business of 'clearing' inter-bank indebtedness in London is distributed between two parts of the London Clearing House, which deal with Town (i.e. City financial district) and General (i.e. remainder). There are also Clearing Houses in the great industrial towns in the provinces, dealing with local cheques, and less formal arrangements in every other large town. We may, however, confine our attention to the London Clearing House, and ignore its internal divisions.¹

Every day individuals all over the country are sending cheques drawn on their accounts at one bank to people who bank with other banks. There will be a continual stream into each bank of cheques drawn on each of the other banks. These cheques constitute claims to deposits in these other banks, and the bank receiving the cheques is, therefore, becoming a creditor of each of the other banks. At the same time, each one of the other banks will have been receiving cheques, paid in by its own customers to be added to their accounts, drawn on the bank we have been considering. To the amount of these cheques, the first bank will be running into debt with the other banks. They have claims against it to the amount of the cheques. All these cheques that have found their way into the other banks are collected twice a day and taken to the Clearing House. There Barclays Bank, for example, will find itself in debt to each of the other banks as they present cheques

¹ These paragraphs give the general principles only. For a detailed account see the Appendix.

drawn on Barclays and paid over their counters; and Barclays will, on the other side of the account, be presenting each of the other banks with cheques drawn on them. The various amounts are added up and offset against each other. Barclays may then find that it has paid a million pounds more on Lloyds cheques than Lloyds has paid on Barclays cheques. They exchange cheques and Lloyds remains a million pounds in debt to Barclays. Suppose with all other banks both these banks find their debits and credits equal, then Lloyds settles the account by drawing a cheque on its own deposit in the books of the Bank of England. Actually each day's transactions will be rather more complicated than this; but the essential process is clear enough—inter-bank indebtedness arising from transfer of deposits from one person to another is offset as far as possible and any remaining balances are covered by transfer of Bankers' Deposits at the Bank of England.

In our example the position after the particular clearing will be that Lloyds deposit liabilities to the public will have decreased by one million pounds (its customers having received a million pounds less from customers of other banks than they have paid to them), and on the assets side its 'cash at the Bank of England' will also have gone down by one million pounds. Barclays deposit liabilities to the public will have risen by one million pounds and so will Barclays 'cash at the Bank of England'. The *aggregate* bank deposits in the country will not have been affected by the operation; nor will the aggregate of 'cash at the Bank of England' ('Bankers' Deposits' as they are generally called). The entire process is a transfer having no monetary significance. The general run of banking business in the country will normally lead to these transfers being small and purely temporary; but if there arises a pronounced tendency for people to bank less with Lloyds and more with the Midland, there will be a continued decline in Lloyds deposit liabilities and equally in its cash reserve. The equal absolute fall in the two figures implies a fall in

the ratio of cash to deposits in Lloyds Bank, and a pronounced movement of this kind would oblige the losing bank to curtail its general lending operations sooner or later. But of the significance of the cash ratio more anon.

III. *The General Control of Banks over Deposits*

We have seen in Chapter I that Bank Deposits are simply entries in the books of banks, saying that persons and corporations have such and such a claim against the banks. These promises are considered by the holders to be balances of general purchasing power. As long as people can be induced to accept these bank liabilities in exchange for assets which they surrender to the bank (including their own claim to money in the future) the banks can create deposits simply by acquiring more and more assets. The economic significance of the creation of bank deposits is based on the power of a person disposing of a bank deposit to attract real resources. A large proportion of the total bank deposits is in practice being continually used to attract real resources, either to the final consumers or to the business men who intend to push those real resources one step nearer to final consumption. These deposits may be described as Income Deposits and Business Deposits. Their total has been called Cash Deposits. Cash Deposits alone are being continually turned over in settlement of debts and some authorities prefer to give the title of Money to no bank deposits except these Cash Deposits. The remaining bank deposits are held not for current business or income purposes but as *investments* or *savings*, and they are commonly called Savings Deposits. They are held not to meet the needs of the near future, but as part of that total stock of wealth which individuals look upon as their savings or private capital.

To anyone who has grasped the true nature of the demand for money balances for income-spending and for business purposes (the Cash Deposits) it will be apparent that the distinction between that part of the demand for

money and the other part of the demand—the part satisfied by the holding of Savings Deposits—is a distinction of degree. All money is held for contingent excesses of payments over receipts. There is no sharp line between the balance I hold in case I have to go on an unexpected long railway journey next week and the balance I hold in case I have to meet a heavy doctor's bill next year. The distinction, though one of degree only, is sufficiently marked in common usage. From one part of his balance the individual looks for no advantage but the convenience which it affords him directly. From the other part—his Savings Deposits—he is inclined to look in addition for some small interest gain, and may be prepared to 'invest' it if an attractive opportunity arises.

The Savings Deposits are by definition not turned over at all. If a man wants either to pay the doctor's bill or to buy government bonds with his Savings Deposits he transfers some of his Savings Deposits to Cash Deposits, and then settles the debts he has incurred. Conversely, if a man decides that his Cash Deposits are unnecessarily large and he sees no better investment opportunity, part of his Cash Deposits become Savings Deposits. Savings Deposits are essentially *idle* deposits or 'hoards'. It is important to remember that whether deposits standing in a customer's name are to be Cash Deposits or Savings Deposits is directly decided by the customer, not by the bank.

The distinction between Cash Deposits and Savings Deposits corresponds in a very rough way to the distinction in English banking practice between Current Accounts and Deposit Accounts, and in America and elsewhere between Demand Deposits and Time (or Notice) Deposits. Not at all exactly, for some of the current account balances are not really Cash Deposits. For example, the minimum balances often maintained on current account to induce the bank to work the account without charge are really Savings Deposits, maintained because the individual enjoys, apart from possessing that private wealth, the

advantage of a 'no-charge' current account. When interest rates offered by the bank on Time Deposits are very low people are inclined to leave inactive balances—which have really become Savings Deposits—on Demand Deposit, because the low yield makes the bother of transfer and re-transfer not worth while. When small income-receivers who cannot afford a current account minimize their cash holdings by working a deposit account up and down from month to month—looking to the account for convenience rather than interest—the balance is practically a Cash Deposit. In the nineteen-twenties some American banks are said to have allowed unrestricted drawing of cheques on Time Deposits; these deposits were then really Cash Deposits. But broadly speaking, the Demand Deposits (Current Accounts) may be taken as corresponding to the Cash Deposits, and the Time Deposits (Deposit Accounts) may be taken as corresponding to the Savings Deposits.

The decision that a given bank deposit shall be a Cash Deposit or a Savings Deposit is, we have already seen, made not by the bank but by the customer in whose name that deposit stands. The deposit may, in fact, change its character without the customer notifying the bank; but it is more likely that such a change will take the form of a transfer from Demand Deposits to Time Deposits (or vice versa). The banks will transfer balances from one of their own classes to the other without hesitation; they leave the distribution of deposits entirely in their customers' hands. But the banks decide the total volume of deposits, by their acquisition of assets. These assets are held as 'cover' for the bankers' liabilities to the public. The general nature of the assets actually held by the banks in England and the United States is apparent in the tables on p. 33 which are taken from aggregated balance-sheets covering most of the banking resources.

The absence of equality between assets and liabilities in the English table is due mainly to the exclusion of shareholders' capital on the liabilities side and the item Bank

GENERAL CONTROL OF BANKS OVER DEPOSITS 33

Premises, &c., on the assets side. These items have also been excluded from the American table, which also excludes the large items of inter-bank indebtedness arising from the correspondent bank system. The items given are those variable items which are of great monetary significance. The division of deposits in both tables is due to the arrangements with customers about the liability of the banks to exchange deposits on demand. Deposits on Current Account in England and Demand Deposits in the United States are subject to transfer or cashing by cheque at sight. The deposits on Deposit Account in England and Time Deposits in the United States are exchangeable nominally only after some notice has been given. For some purposes the two classes must be considered separately, especially in American contexts; but as customers can convert one class of deposits into the other without the banks taking any action (bank action only affects total deposits) it is permissible to take the total figures for this first approach to the problem of commercial bank operations.¹

SUMMARY OF LONDON CLEARING BANKS' FIGURES

June 1959
(£ millions)

<i>Liabilities</i>		<i>Assets</i>	
Deposits:		Cash in hand and at the	
Current Accounts	3,967	Bank of England . . .	550
Deposit Accounts	2,394	Money at Call . . .	488
Total	6,361	Bills discounted . . .	1,154
		Advances	2,602
		Investments	1,816

UNITED STATES—ALL COMMERCIAL BANKS

27 May 1959
(\$ millions)

<i>Liabilities</i>		<i>Assets</i>	
Demand Deposits . . .	122,000	Loans	102,000
Time Deposits	65,000	Investments	83,000
		Cash Assets	42,000

¹ This chapter must accordingly not be considered as exhaustive, even in an elementary way. All the conclusions are subject to modifications suggested in later chapters.

In these tables the English item 'Cash in hand and at the Bank of England' is equivalent to the American 'Cash Assets'. The latter include both the required 'Cash with Federal Reserve Bank' (parallel to 'cash at the Bank of England') and 'cash in vault' (English 'cash in hand' or 'till money'). But the 'cash ratio' to which the American banker is bound by law to attend is the ratio of his deposit at the Federal Reserve Bank to his deposit liabilities to the public, while the cash ratio to which the English banks customarily attend is the ratio to deposits of their reserves at the Bank of England *plus* their till money. As we shall see that these 'cash ratios' are of great significance, we should take as comparable the English banks' 'Cash in hand and at the Bank of England' and the American banks 'Cash Reserve with Federal Reserve Bank'. Should we wish to compare the profitability of banking in the two countries we should, of course, have to remember that the American item does not exhaust the list of non-earning assets; it would be necessary to take account of cash in vaults and tills.¹

In comparing the two tables it will be noticed that the distribution of assets is quite different in the two countries. In England loans of various kinds formed a much larger proportion of the total than they do in America, whilst cash, for instance, was much lower. We should find other differences if we were comparing, say, Australian and Canadian figures. The distribution of banking assets varies greatly from country to country, according to the structure—or absence—of the money-market, the wealth of the business classes, and the general commercial and industrial structure of the country. Arguments given in terms of English banking methods can be applied to other systems only when appropriate modifications of the argument have been made. We shall return in Chapter 8 to cer-

¹ There are now (in 1959) proposals for amendment of the American system, to allow vault cash to be included in the required minimum cash reserves.

GENERAL CONTROL OF BANKS OVER DEPOSITS 35

tain outstanding problems of the distribution of banking assets.

In the English table, *Cash in hand* means Bank of England notes and coin in the tills and vaults of the commercial banks. *Cash at the Bank of England* means a book entry, a deposit in the Bank of England in favour of the bank. It should be noticed that the combined cash item therefore consists, apart from the unimportant part which is coin, of liabilities of the Bank of England. The cash reserve thus consists fundamentally of central bank I O U's and this is substantially the case also in the U.S.A. *Money at call* means loans to certain firms in the City,¹ loans which are repayable nominally on demand. The banks have in the past given deposits to these firms in exchange for their promises to repay at call or short notice. The firms will have paid away these deposits to other people; if they are called upon to repay they must in some way or other obtain command of deposits that now stand in other people's names. *Bills discounted* are virtually I O U's (or post-dated cheques) which the banks have bought. The banks hold these pieces of paper, having given for them deposits. At the due date (i.e. at the maturity of the bills) the drawers of the bills are under obligation to provide bank deposits to the face value of the bills. The bill of exchange is therefore a particular type of promise to pay, and the item Bills Discounted represents loans to people who have drawn the bills. A large part of this total represents *Treasury Bills*.² *Advances* are the better-known loans—usually in England on the overdraft system—to industrialists, professional men, and others. The banks allow the business men to pay deposits to other people on the understanding that they will, within a fairly short period, obtain deposits for repaying the bank if called upon to do so. *Investments* are securities, especially British Government and other Commonwealth securities, having longer lives than the

¹ These firms are the *Discount Houses* discussed in Chapter 3.

² For details of Treasury Bills see pp. 52–55 below.

three-months' Treasury Bills. When a bank buys a *new* government security it places at the disposal of the government a bank deposit. When it buys an *old* security through the Stock Exchange it places a deposit at the disposal of the person who has sold the security.¹

All these assets, except cash, bring some income to the bank. They are 'earning assets'. The desire to maximize profits would therefore seem to give banks an incentive to increase the supply of money without limit. But this urge is restrained by their need, in order to maintain the confidence of their customers, to maintain a considerable degree of *liquidity*. We observed earlier² that liquidity broadly means 'capacity to produce cash on demand for deposits', and it follows that 'cash' itself is the perfectly liquid asset. The desire for immediate profit encourages the banker to minimize his cash holding, but his desire for liquidity (based on a longer view of profit-earning capacity) encourages him to maximize his cash holding. These conflicting forces, in the course of the evolution of the English banks we know today, led to a convention that a 'cash ratio' (ratio of cash to deposits) of 10 or 11 per cent. was proper. In the first four decades of the twentieth century this conventional ratio was to an important extent illusory, the published figures of most banks being subject to 'window-dressing', but since 1946 a true cash ratio of 8 per cent. has been established and the banks actually work very closely to this figure.³

¹ As this is sometimes a point of difficulty it may be as well to summarize the proceeding. Lloyds buys a bond through the Stock Exchange paying, say, £1,000 for it with a cheque on its balance at the Bank of England. Mr. A has sold the bond and directly or indirectly receives the cheque for £1,000, and pays it into his account at Barclays. Barclays Total Deposits go up by £1,000, and when they present the Lloyds cheque to the Bank of England, through the Clearing House, Barclays cash goes up by £1,000, Lloyds going down by the same amount. Lloyds investments have gone up by the amount their cash has gone down, their deposits are unchanged, and Barclays are up by £1,000. If Mr. A banks with Lloyds then there is no redistribution of cash; but Lloyds investments and Lloyds deposits both go up by £1,000.

² See p. 23 above.

³ The figure of 8 per cent. refers to the mid-week position. Within the week some variation may be allowed; the withdrawal of notes on Fridays

Among the other assets (the 'earning assets') there is the same conflict between the desire for immediate profit and the desire for liquidity, and in general the banker looks to earn most on his least liquid assets—higher income compensating for the risks that lower liquidity implies. The banker must have regard to his general liquidity position, and must therefore see that he has, besides cash, a reasonable proportion of the more liquid earning assets despite their lower earning power. The most liquid earning assets are the 'money-market assets'—Money at Call and Bills Discounted. A bank can, by refusing to renew short loans ('Money at Call') in the money-market, force the borrowers to provide cash (which the borrowers in turn will have obtained from the Bank of England), and for this reason Money at Call is a highly liquid asset. Bills Discounted are nearly always within three months, and mostly within a month, of maturity (when they are due for exchange into cash) and in case of real need they can be sold to the Bank of England with little or no loss.

During the nineteen-forties the banks also held Treasury Deposit Receipts which were slightly less liquid. They had lives of five, six, or seven months, and were not marketable or exchangeable into cash by any money-market arrangement. The only possibility of 'encashment' before maturity was by discounting at the Bank of England, but as the official Bank Rate would be charged, a loss would be suffered by the discounting bank. The banks regarded the T.D.R.s as appreciably less liquid than the 'money-market assets' just mentioned; they were regarded as a wartime innovation and bankers made no secret of their relief when the authorities ceased to call upon the banks to hold T.D.R.s. Their reintroduction was considered in 1956 and rejected; and in 1959 the Radcliffe Committee did not advocate their revival.

(for wage-payments) and their return on Mondays and Tuesdays are thus equally irrelevant to the banks' estimate of their position in relation to the required cash ratio. Window-dressing may still occur on 30 June and 31 December every year, unless such a date falls on a Wednesday.

Investments, being marketable on the Stock Exchange at variable prices, are still less liquid. Typically, but not exclusively, they consist of government bonds. The nearer they are to maturity (repayment date) the less are their market prices likely to diverge from face values, and therefore the more 'liquid' are the investments. Bankers therefore like to hold among their investments a fair proportion of bonds near to maturity. Current English practice is to have most of the portfolio falling due within ten years and to have about half of the total maturing within five years.¹ In the U.S.A. the proportion of short-dated bonds (say within five years of maturity) is higher than in English practice.

Last in the range of liquidity come Advances, because it is extremely difficult to shift a mere promise to pay on to another bank—even when that promise is reinforced by 'collateral security'. An individual bank never wishes to drive a borrowing industrialist into the arms of one of its competitors, nor will the Bank of England relieve a commercial bank of such assets.

In present English conditions there are always available sufficient earning assets of these various types, attractive to bankers, to enable the banks to extend their commitments up to the hilt—the point consistent with the amount of their cash reserves. The volume of the cash reserves, and therefore also the total of the banks' earning assets and of their deposits, is subject to control by the central bank. This control is exercised in a complicated manner, to be explained in later pages,² and we cannot at this point follow through the whole process of the determination of the volume of deposits. We can, however, consider how the efforts of the banks to maintain a stable cash ratio (at 8 per cent.) bear upon the total of bank deposits in the country.

¹ In general English banks insist on a definite maturity date or narrow range of optional dates; the Consols, which have no fixed maturity, are therefore now abhorred, although they used to be almost universally held by bankers.

² See Chapter 9 below.

As the banks, in their desire to add to their incomes, add to their earning assets, certain quantities besides the earning assets change. Total deposits increase, while the absolute cash reserve remains unchanged: the cash ratio therefore falls as the volume of deposits rises. This tendency is apt to be reinforced by the fact that as total deposits increase, prices and the total volume of transactions may sooner or later increase, causing an increase in the public's demand for notes, &c., in circulation. The public draws notes out of the banks, who find their *absolute* cash reserves falling while the total volume of deposits has increased. The cash ratio is thus subject to decline on two accounts—the increase in deposits and the drain of cash into circulation. Given the absolute size of the cash reserves in the hands of the commercial banks, there is a maximum appropriate total of deposits that leaves the banks with the conventional ratio of cash to deposits. The ratio being 8 per cent., and the cash reserves £80 millions, the banks can maintain deposits at £1,000 millions. If, with cash reserves of £80 million, the aggregate deposits are below £1,000 millions, the banks can afford (and will be induced by the prospect of bigger incomes) to acquire more earning assets, raising the value of deposits from, say, £900 millions to £1,000 millions. Suppose, on the other hand, that cash is £72 millions when deposits are £1,000 millions, the banks in pursuit of their liquidity standards will sell some earning assets. Though each bank individually is striving for more cash to support the deposit structure, the commercial banks taken together cannot add to their cash, and the adjustment of the cash ratio is achieved by the decline in deposits resulting from the sale of earning assets to the public. When deposits have shrunk to £900 millions, the cash ratio will be at 8 per cent., and the banks will be satisfied.¹

¹ In these figures it is assumed that the variation in total deposits held by the public does not cause any variation in the public's demand for cash. If, however (in the way indicated above), an increase in the total of deposits

The banks, subject to the supply of 'cash' and the public's demand for cash, have absolute control over the volume of deposits. The fact that they maintain a fixed ratio simply means that they hand over to someone else the responsibility of determining the volume of deposits. That 'someone else' is the central bank. If the central bank can control the supply of cash and allow for the public's demand for cash for circulation, the volume of bank deposits is absolutely determined. If the central bank wants the commercial banks to be responsible for a certain amount of deposits, it has only to create the amount of cash for circulation which is appropriate to that level of deposits, *plus* the amount of cash that will give the commercial banks their customary cash ratio to that level of deposits—*always provided that the banks can be relied upon to maintain that cash ratio*. If the central bank wants the volume of deposits to increase, it must create more cash—the commercial banks can be relied upon to do the rest without overstepping the limits set by the central bank.

The cash ratio is thus one of the main links in the chain of central bank control of the monetary situation. Rigidity of the cash ratio helps the central bank, in that this rigidity implies that changes in the cash base will have immediate and proportionate effects on the total of bank deposits. In the present English system, however, the central bank does not choose to keep a grip on the cash base; the problem of control of the total of bank deposits in this circum-

causes an expansion in the total of business transactions (higher prices or higher volume or both), a cash surplus in the banks, leading to increased deposits, will be partly reduced by seepage of cash into circulation. Adjusting the first of the arithmetical examples given above, it may be supposed that as deposits rise from £900 to £950m., £4m. of cash are absorbed into circulation; the banks will then have to stop expansion, as they will already be down to the 8 per cent. cash ratio. Correspondingly, if shrinkage of deposits forces a shrinkage in the total of business transactions, the public's need for cash will be reduced, and the consequent return of cash from circulation into the tills of the banks would moderate the shrinkage of deposits necessary to restore the cash ratio.

stance is more complex, and we shall have to return to it in later chapters. Even under present conditions, however, the fact that the commercial banks must keep certain cash reserves gives the central bank a latent power which it could exercise if it chose.

THE DISCOUNT MARKET

1. *The Bill of Exchange*

IN the City of London there is a handful of highly specialized firms who constitute 'the discount market'. They work in close touch with the commercial banks—both those whose main business is in England and those whose main business is overseas—and with the Bank of England. They deal as principals in certain classes of financial assets, which they are enabled to hold mainly by continual but temporary borrowing from the commercial banks, who look to the discount market as the immediate outlet for any surplus cash—any 'excess reserves' as we might say. The financial assets held in the discount market are bills of exchange, Treasury Bills, and short-dated government bonds. Though bonds have, in fact, been dealt in by discount houses since the First World War, they became a recognized discount market asset only in 1934-5. The Treasury Bill since the First War has dwarfed the ordinary bill of exchange, but it was business in the latter that provided the foundation and shaped the ways of the discount market, and the bill of exchange must therefore take first place in this account.¹

A cheque of the ordinary kind is technically a Bill of Exchange payable at sight; but the layman can most readily grasp the nature of the Bill of Exchange if he considers it as a post-dated cheque. This is in effect what is used when a creditor, accepting a cheque, promises not to present it at the bank for a few days. Then John

¹ The reader may find further details on the subject of this section in *The Bill on London*, prepared by Messrs. Gillett Bros. Discount Co. and published by Chapman and Hall, London, 2nd ed., 1959.

Brown has a claim against my bank on my account and receives payment on the due date. If he should want the money earlier he must find someone who will take the cheque (after he has himself endorsed it) to hold until the due date, and the man who provides the money may deduct a small amount to compensate him for waiting till the due date.¹

When our post-dated cheque is called a Bill of Exchange the due date is called 'maturity'. The process of handing round the endorsed bill in exchange for ready money before maturity is called 'discounting the bill of exchange'. The margin between the ready money paid and the face value of the bill (which is the amount payable by the debtor at maturity) is called the 'discount', and is calculated at a rate per cent. per annum on the maturity value.

Suppose that Thomas Debtor buys goods from John Creditor. Creditor wants his money now, but Debtor wants to postpone payment until he has resold the goods. They may agree to settle the transaction by Creditor 'drawing a three months' bill' on Debtor.² The form will be something of this kind:

London, 27th July 1957.

To Thomas Debtor,

Three months after date please pay to John Creditor or Order, the sum of One Thousand Pounds for Value received.

Signed: John Creditor.

Then Creditor is the Drawer of the bill and Debtor is the Drawee of the bill. Creditor sends the bill to Debtor who acknowledges his responsibility for payment of the

¹ This paragraph is essentially a layman's description for other laymen; the commercial lawyer will find a looseness of expression which I think is defensible in this context. And the word 'waiting' in the last sentence will offend the post-Marshallian economic theorist. Strictly I should have written 'parting with liquidity'.

² Actually bills in the London market vary in currency from one to six months; but throughout the following pages the three months' bill has been taken as typical: the great majority of London bills are three months' bills.

thousand pounds at maturity by writing on the bill his 'Acceptance'. When the bill has been 'accepted' Debtor has for the time being closed the transaction. He simply has to be ready to pay a thousand pounds to any one who happens to own the bill three months hence.

As Creditor prefers immediate cash to a thousand pounds in three months' time, he takes the accepted bill to someone who has money to lend on such security. But Creditor does not *borrow* on security of the bill. He *sells* the bill—parts with all his interest in it—outright. Creditor has to endorse the bill to show that he has parted with his claim. His endorsement incidentally renders him liable to meet the bill at maturity should Debtor fail to do so. When Creditor sells the bill the financier who takes it from him pays not £1,000 but, say, £990. The £10 difference represents the interest on £990 for the three months which must elapse before maturity—the rate of discount would then be quoted as 4 per cent.¹ The financier has in fact exchanged £990 now for £1,000 (due from Debtor) three months hence, the £10 is his price for doing so, and the bill is legal evidence of his claim to the £1,000.

The bill is a convenient instrument because, like a government bond, it can change ownership conveniently during its currency. If the financier who took the bill from Creditor decided, after, say, a month, that he needed cash he could raise cash by *rediscounting* the bill. The bill would now represent a claim to £1,000 *two* months hence, and the spot cash price for it would (if the relevant interest rate is again 4 per cent.) have risen to £993. 6s. 8d. He would have to endorse the bill and would be responsible for meeting it at maturity should the other names on it fail. But, supposing all goes well, the transaction has closed as far as he is concerned and he has secured interest at 4 per cent. per annum for one month's loan of £990.

¹ The arithmetician will notice here the difference between 'true discount' and 'commercial discount'—the rate of the latter being calculated on the sum payable at maturity.

11. *The Structure of the Discount Market and its Traditional Functions*

The trade bill described above is a device for securing in a convenient form, and with clearly understood legal safeguards, the financing of a transaction in goods that takes some time to complete. The importation of foodstuffs and raw materials into England are transactions of this kind and some of these are financed by the discounting of bills. Neither exporter nor importer has to go without his money while the goods are in transit, the money for the exporter being in fact provided by the *discount market*, until the importer has had time to resell the goods. If, as will generally be the case, neither the exporter nor the importer is a man whose name is recognized in the discount market as a credit-worthy name it may be difficult to secure money for the bill unless some firm of repute can be induced to guarantee the bill. It is worth paying some commission to secure a good name on the bill as the ease of discounting is much increased, and the appropriate rate of discount is lower. The specialist firms called the *Accepting Houses* provide these guarantees, for which they charge commission. They maintain agencies in important trading centres abroad and make it their business to know the credit-standing of various traders. Having ascertained that an American importer is credit-worthy the *Accepting House* is willing to open an *Acceptance Credit* for him. The size of the acceptance credit will depend on the size of the importer's transactions and the *Accepting House's* estimate of his ultimate resources. Suppose the credit to amount to £20,000. Then the American importer buys goods in England from an English merchant, the latter agreeing to take as payment a three months' bill for £15,000. The price of the goods may be called £15,000, but it is understood that three months' credit is given. Then the English merchant is advised by the American that the latter has a credit with such and such an *Accepting*

House. The English merchant then draws a bill, not on the American importer but on the Accepting House. The Accepting House has made itself liable to meet bills on the American's account up to the £20,000 limit. The bill is then sent to the Accepting House in London, which acknowledges its obligation by 'accepting' it. The bill can then be discounted readily by the English merchant (or his agent). It has a first-class British name on it and will be discounted at one of the lowest rates in the market. The Accepting House has its own arrangements with the American importer, whereby the latter promises to meet the debts which he incurs. The bill itself is payable on maturity by the Accepting House. For the use of its name in this way the Accepting House charges a commission, and its receipts from commissions enable it to maintain in various commercial centres the credit intelligence service which is essential to the avoidance of bad debts. The Accepting House must be recognized in London as having ample resources of its own for meeting all the obligations it incurs—otherwise its name on a bill would have no value and there would be no advantage in drawing bills on the Accepting House.

Sometimes the arrangement between the debtor who has to pay ultimately and the Accepting House is made indirectly through the debtor's bank. If the debtor is, say, an Argentine importer, he can induce his own bank in the Argentine to secure an acceptance credit for him in London, enabling him to tell his creditor to draw the bill on a great London Accepting House. The Argentine bank makes itself responsible for the debt to the Accepting House and makes its own arrangement with the final debtor, the Argentine importer. An acceptance credit of this type is called a 'Reimbursement Credit'. The Accepting Houses and banks grant these reimbursement credits at particularly low rates (frequently $\frac{1}{2}$ per cent.) as all they have to do is to satisfy themselves about the soundness of the Argentine bank—a very much simpler matter than looking into the credit-worthiness of an individual Argentine importer.

The Argentine bank will itself naturally make some charge to the Argentine importer; but the division of labour in seeking credit information, between the London Accepting House and the Argentine bank, may well lead to some reduction in the total cost.

The great London Accepting Houses are able to combine these functions with a number of other financial transactions of one kind and another—the raising in London of long-term capital for large borrowers, for example. Frequently they are referred to as the ‘Merchant Bankers’. Some of their names are among the best-known financial names in the whole world—Barings, Rothschilds, Kleinworts, Erlangers, Lazards, &c. The great joint-stock banks also have an extensive Acceptance business, which can be worked in easily with their ordinary banking business in the great commercial centres.

Once it has been accepted the bill is ready for discounting in the London discount market. The discount market consists of a dozen firms, including three large concerns that have long been public companies and nine smaller ones that have more recently grown from private partnerships into public companies.¹ In addition, there are three or four small firms called the ‘running-brokers’ who now do a little business of the same ‘dealing’ kind as that of the discount houses and also act as agents for some of the ‘outside banks’ and other customers. The typical and traditional work of a discount house is to borrow money from the banks and other institutions with money to lend on short-term, and use that money to buy and hold bills of exchange. They borrow from some ninety lenders in the discount market, including not only the ordinary English commercial banks but also a large number of foreign and colonial banks and the ‘merchant bankers’.

¹ The nine discount houses often referred to as the ‘bill-brokers’ are now all organized as joint-stock companies (each having a capital of at least £1m.), but the phrase ‘companies’ still clings, in discount market language, to the three original companies (the Union, the National, and Alexanders).

The money that the creditor wants in exchange for his bill is thus provided by a discount house which has, on the whole, found it by borrowing from a bank. The bank has put a bank deposit (a claim against itself) at the disposal of the discount house, and the discount house puts it at the disposal of the firm which has brought the bill along. These loans from the banks to the discount market are the most important part of the Money at Call which appears in the banks' balance-sheets. The traditional source of discount market profits is in the difference between the cost of these loans and the discounts earned on bills held. The discount houses borrow from the banks at call at low rates of interest in order to discount bills at rates which are in general rather higher. When a discount house takes up a three months' bill it does not secure the necessary money by borrowing for a term of three months. It finances its holding of the bill by borrowing from day to day.¹ The trouble of getting loans renewed, the risks of not having them renewed, and so forth, are compensated by the relatively low rate of interest at which the banks will make these short loans. After a discount house has taken up a three months' bill at, say, 4 per cent., relying on securing short loans from the banks at $3-3\frac{1}{2}$ per cent., the cash reserve position of the banks may change, forcing the banks to curtail their short loans, rates on which may rise sharply—perhaps to 5 or 6 per cent.² If this goes on for long the discount house, far from having made a profit, will have incurred a loss as a result of having discounted that particular bill. It must, therefore, when discounting a bill make up its mind about the prospects of call and short money rates throughout the

¹ Most of the money is nominally at call, but the large part which comes from the major banks is in fact allowed to run on uncalled week after week. Marginal amounts called 'overnight money', supplemented if necessary by small amounts of 'privilege money', can be obtained from some of the larger clearing banks, and a large proportion of the overnight money and all the privilege money would automatically be repaid the next morning.

² Such a big change as here supposed could only take place with a phenomenal jump in Bank rate.

currency of the bill. The market rate of discount today for three months' bills will be dependent not only on short money rates today but also on their prospective levels throughout the next three months.

What will happen if all the banks are calling in loans from the discount market? How will the discount market be able, at any rate of interest, however high, to secure the funds for paying off the banks? Some bills will be maturing each day, and the bill market could conceivably raise some money by not taking up fresh bills as the old bills mature. But this may not be sufficient to provide the requisite amounts. Then what happens is that the bill market goes to the Bank of England which traditionally will always help the bill market, *at a price*. The Bank of England is frequently prepared to operate at the ruling market rate, but it reserves the right to charge its official Bank Rate (for discount of any approved bills) or to give relief by lending for seven days against Treasury Bills at Bank Rate. The fact that they may have to go to the Bank of England for help (even though under the present system they know they will be helped at a lower rate than Bank Rate) makes the discount houses careful to hold their operating rate at a level approved by the Bank of England. The market knows that cash will always be forthcoming to enable them to meet calls from the banks who are its normal suppliers of cash, but it also knows that the price at which the cash will be forthcoming is a price chosen by the Bank of England. Through its relations with the discount market the Bank of England thus has effective control over discount rates.

This use of the Bank of England as a last resource is limited in a way that has important effects on the rates at which various classes of bills can be discounted on the market. Historically in order to guard itself against bad debts the Bank of England has certain rules restricting the classes of bills of exchange which it will rediscount or which it will accept as security for advances to the discount

market. Among ordinary bills of exchange such as have been described above the Bank will only countenance bills bearing at least two good British signatures, one of which must be that of the Acceptor. The fact that a discount house can go to the Bank of England in the last resort only with bills of exchange that satisfy this condition makes the discount market prefer such bills. This preference is shown in the lower rate of discount at which these bills can be discounted. As a bill accepted by a great Accepting House or British bank would ordinarily fall automatically in these classes of 'eligible bills' (bills eligible for rediscount at the Bank of England) the value of the Accepting House's signature is patent.

In handling the ordinary commercial bills of exchange (of which the total in the market nowadays is of the order of £250m.) the discount houses render important services as intermediaries between the originators of the bills and the commercial banks which often own the bills at maturity. The banks like, for the sake of liquidity, to have their bills arranged in order of maturity, a certain proportion falling due each week. They do not particularly want the trouble of acquiring a lot of small bills, but prefer buying large 'parcels' of bills from the market, the parcels being of amounts and maturities which the banks happen to want at the moment. A discount house having a parcel of the amount and maturity which a bank is wanting will not borrow from the bank (leaving the parcel as security) but will take the bills to the bank for rediscount. The discount house parts with the bills for ever and takes 'money down' in exchange. It has sold the bills to the bank. The discount house that endorsed the bills remains in law liable to meet the bills at maturity should the acceptors, the drawers, and any previous holders default. Otherwise its interest in the bill ceases. The rate of discount at which the bank takes the parcel will, *ceteris paribus*, be less than the average rate at which the discount house discounted the various bills in the parcel. The margin between the two rates may be re-

garded as the interest and risk premium covering the period of holding the bill, plus a commission paid by the bank to the discount house for having collected just the classes and maturities of bills which the bank was wanting to balance its portfolio, and in some slight degree for the discount house's name having been added to the list of people from whom the maturity value of the bill can, if necessary, be claimed. When the bills coming into the market were infinitely varied in credit standing, in maturity, and in maturity value, these margins between rates were a large source of the discount houses' income.

It should be added that an English joint-stock bank never parts with a commercial bill it has once taken.¹ Once a bill of exchange finds its way into a joint-stock bank it rests there until maturity. Unless the custom existed the banks might not be so willing to leave to the discount houses the sifting-out of attractive maturities. The banks used to prefer to hold bills with not more than about two months to run to maturity, and in these circumstances an important function of the discount houses was to hold bills for the first month or so of their currency, selling them to the great joint-stock banks as, with lapse of time, they became shorter-dated paper. Under some circumstances there is a more lively demand for shorter-dated paper, and then discount rates are lower for, say, two months' bills than for three months' bills. This difference of rates allows the discount houses to earn on the paper they hold rates that are above those prevailing for three months' bills. To give an extreme case,² suppose the three months' rate is 5 per cent. and the two months' rate is 3 per cent. The discount house pays at the outset £987. 10s. for a three months' bill ($£12. 10s. = 1\frac{1}{4}$ per cent. on £1,000 = 5 per

¹ This custom used to apply equally to Treasury Bills, but since 1938 sales of Treasury Bills by joint-stock banks have been increasingly frequent, in the context of Bank of England operations to help the market (see pp. 99-106 below).

² The figures given here are highly artificial and are designed to ease the reader's mental arithmetic.

cent. per annum). At the end of a month it resells the bill to a bank at 3 per cent.—i.e. at £995 (3 per cent. per annum = $\frac{1}{2}$ per cent. for the two months; $\frac{1}{2}$ per cent. of £1,000 = £5). Then the discount house has earned £7.10s. on a loan of £987. 10s. for one month, which is at a rate of about 9 per cent. per annum—which would probably leave it a good margin over the rate at which it took short loans from the banks. This profit will be increased if rates have moved downwards during the first month, and decreased if rates have moved upwards. In circumstances of varying discount rates, such profits as these can make an important contribution to the discount houses' income.

III. *The Treasury Bill*

The commercial bill we have been discussing so far is a device for raising money on goods during their transit from one place to another. Such a device could hardly be well established without people realizing that a bill might be used for the borrowing of money without any goods being in transit at all. Such bills are called 'finance bills', and they vary in quality from the perfectly good finance bills that used to play an important part in the mechanism of the foreign exchange market to the semi-fraudulent paper put out by any hard-pressed debtor. The ease with which the finance bill can be exploited by needy borrowers led to the leading houses avoiding such paper, and the change in the mechanism of the foreign exchange market has somewhat reduced the scope for finance paper, so that ordinary finance bills are not common nowadays. But a particular kind of finance bill put out by a needy borrower is nowadays the most common bill in the discount market. This is the Treasury Bill. The Treasury Bill is a mere promissory note of the British Government. In exchange for deposits at the Bank of England the British Government gives a written promise to pay ninety-one days later (or sixty-three days later) a sum of £5,000.¹ The form of the Treasury

¹ Bills for £10,000, £25,000, £50,000, and £100,000 are also issued.

Bill leaves a space for the creditor's name; but the sum is payable to 'Bearer' if no name has been entered, and most of the bills the market handles remain Bearer Bills. This would be unthinkable with ordinary commercial bills where the addition of each signature adds to the security. But the Treasury Bill is a promise of the British Government, and no discount house or bank signature can add to that security. The unquestionable security makes it possible for them to pass round the market as Bearer Bills without anyone hesitating to take them up if he has money to lend.

The principal advantage of the Treasury Bill to the Government as the borrower is that it is on the average cheaper than long-term borrowing. This cheapness to the borrower reflects the advantage the lender enjoys in having his money certainly available very soon. The creditor lends his money knowing that the exact sum will be paid to him three months (or two months) hence. For such highly 'liquid' security the lender is in general willing to lend at rates appreciably lower than those he expects when he ties up his money for years (or can retrieve it only by sale on the Stock Exchange, perhaps at a big capital loss). Even when, as in 1956, Treasury Bill rates are as high as, or even higher than, long-term rates, the Government sees advantage in borrowing on Treasury Bills in order to limit its sales of bonds that commit it to paying high rates of interest over a long period of years. The Treasury Bill has in fact been a boon to both parties: the Government, whose borrowing needs have been swollen by two great wars, and the discount market, which since 1929 has found the supply of commercial paper¹ uncomfortably small. The central bank also finds advantage in the existence of a substantial volume of Treasury Bills for, as we

¹ 'Commercial paper' is here used in the London sense of any bill having its origin in a commercial transaction, in contrast to 'government paper'. In New York and therefore in Chapter 10 the term 'commercial paper' has another connotation.

shall see in Chapter 5, the Treasury Bill is an ideal security for the central bank to buy and sell.¹

The Treasury Bills are issued partly by 'tender', partly 'through the tap'. The tap issue is to government departments that have funds in hand and to certain overseas monetary authorities. The government departments include, besides the ordinary departments of State, the Government savings banks, the statutory insurance funds, the Bank of England Issue Department, and the Exchange Equalization Account. The rate of discount at which the bills are issued through the tap is unknown and is irrelevant to the discount market. The tender issue is offered to London bankers (including many Commonwealth and foreign banks), discount houses, and brokers. Anyone else wishing to tender must apply through one or other of these channels. The Government invites these firms to offer a price, to be paid on some day in the following week, for every £100 that the Government will pay to them at the Bank of England exactly three months later. If a discount house is willing to take Treasury Bills at, say, £4. 10s. 8d. per cent. per annum, it tenders on Friday for the amount it is willing to take (not less than £50,000) at a price £98. 17s. 4d. per cent., specifying that it will take up the bills on, say, Tuesday. On Tuesday it must pay into the Government account at the Bank of England £49,433. 6s. 8d. Thirteen weeks after that Tuesday the Government will pay to the discount house £50,000 against surrender of the Treasury Bills.²

The tender issue is made every week and the amount offered is usually between £200 and £300 millions each week; the amount is varied continually in order to offset variations in other government receipts and disbursements.

¹ The volume of Treasury Bills may, however, be swollen by government needs to a size that creates difficulties for a central bank, since Treasury Bills are highly liquid assets for banks to hold.

² The above details apply to ninety-one-day bills. In the autumn of each year, sixty-three-day Treasury Bills are also issued; the arithmetic for these is precisely parallel.

At the peak revenue season (January to March), for example, the Treasury Bill issues are reduced, maturities of old bills being allowed to exceed the weekly offer; on the other hand, a big bond maturity or excess government expenditures may occasion a temporary expansion of the Treasury Bill issue, new bills issued exceeding maturities of old bills.

The procedure has now become highly conventionalized and is the subject of close understandings between the banks, the discount houses, and the authorities. The clearing banks—the ordinary English commercial banks—tender for Treasury Bills only on behalf of their customers. They do not tender on their own account but obtain all the bills they want from the discount houses after the latter have held the bills for at least a week. The discount houses are formed into an Association, and members of the Association tender on the basis of an agreed price.¹ The total amount of bills tendered for by the discount houses corresponds more or less to the total offered in each week, but there is always also a large ‘outside’ tender, by certain overseas banks and others outside the London Clearing Banks’ group, and by the Bank of England (operating both as an agent for others—e.g. the Federal Reserve Bank of New York—and on account of its own Banking Department). To obtain bills the outside tenders have therefore to be at prices equal to or a shade above the Association’s price. In so far as they are at a price favourable to the Treasury, the outside tenders are accepted in full, and the associated discount houses get the rest (their price being a shade lower—i.e. their discount rate a shade higher). Every discount house finds its allotment bears the same proportion to its tender—sometimes a high proportion,

¹ The concerted tender is recognized by the Bank of England. It is often referred to as tender by ‘the syndicate’, the use of this word originating in successive arrangements between a number of discount houses in the 1930’s. The internal arrangements of the syndicate are highly complex and do provide for a far stronger element of competition between members than the word ‘syndicate’ implies.

sometimes a low one, according to whether the outside tenders (at the cheaper rate) are small or large. The Treasury each week announces the *average* price at which it has placed the week's offer of Treasury Bills—and the higher the proportion allotted to the discount houses, the nearer is this average price to the Association's price.

On the day a Treasury Bill has been issued—when it still has three months to run—it is called a 'hot' bill. Hot bills are often in demand for the customers of the banks. Any time after it is seven days old one of the big banks may buy it (at the ruling market rate, which will usually be a few pence less than the original tender rate), but most of the bills stay with the discount houses for at least three or four weeks. After that the banks more and more eagerly buy them, and few of them remain in the portfolios of the discount houses right to maturity. While they are held by the discount houses, the bills are used by the discount houses as security for the money that they borrow at call, &c., from the banks. For this money they have to pay rates of interest varying from day to day and from hour to hour; on the average these rates are below the Treasury Bill rates and therefore allow the discount houses a 'running profit' on the bills in their portfolios.

IV. *Short Bonds, and the Present Position of the Discount Market*

In the Great Depression of the nineteen-thirties, the total value of commercial bills outstanding at any one time dwindled to a hundred millions or so, and the market's margin on Treasury Bills became insignificant or even negative. In these circumstances the discount market turned, in an attempt to earn a reasonable living, to operating in short-term government bonds. Some of these bonds are issued originally with short lives—one-, two-, or five-year Exchequer Bonds, for example. Others are bonds that have originally had a much longer life—a twenty-year War Loan or Conversion Loan, perhaps—but become 'short

bonds' as they approach maturity. When these longer-term bonds are within a year or two of maturity, and particularly if they stand at a premium, they have little appeal to the ordinary investing public, as new purchases; and though some holders will continue to hold them until maturity, the majority of the bonds will always through various circumstances (death, bankruptcy, alternative investment attractions, &c.) be coming on the market. As maturity approaches it is worth the while of financial institutions such as discount houses to offer an attractive price to obtain securities which, while not as liquid as three-months' bills, are absolutely firm claims to cash payment in a reasonably short time and will at such a price yield a definite return.¹ For many years this return was appreciably above the rates at which the discount houses could borrow the money to enable them to hold the bonds (which were pledged as security), and the discount houses were therefore able to earn a comfortable 'running profit' on their bonds.

At first this development was thought a dangerous one, and it depended much on the funds that discount houses were able to borrow from the 'outside' banks—the foreign and colonial banks, and other financial institutions not primarily concerned with banking in England. But with the growing weight of government debt operations after the middle nineteen-thirties, the authorities realized that this new business of the discount market could facilitate the big official operations in course and in prospect. The chief objection to the business was that, the bonds being much less liquid than bills, there was a risk (if only remote) of large loss if the discount houses had to sell their bonds before maturity in a period of rising interest rates.² The

¹ The price offered by a discount house will be higher than that offered by any 'ordinary investor', since the latter cannot finance his holding by cheap 'money at call' and is differently taxed.

² Taking a crude arithmetical example: if, when a one-year 1 per cent. bond has just been bought at 100, the rate on one-year bonds rises to 2 per cent., the market price of the 1 per cent. bond will fall to about 99

Bank of England therefore took the view that the capital structure of the discount market should be strengthened, and that once this had been done the bond dealings of the discount houses might be benevolently regarded as long as they were confined within reasonable limits. Some of the smaller houses were amalgamated and there was a general move to increase capital; the present position is that every one of the twelve discount houses (i.e. excluding the running brokers) has capital resources of at least a million pounds.¹ Bond dealings are regarded as a legitimate activity, the great English banks as well as the 'outside institutions' regularly lend money to the discount houses against bonds, and the Bank of England also regards these bonds as eligible security when the discount houses apply to it as the lender of last resort.

The official benevolence is entirely dependent on observance of reasonable limits. These relate to the total sum that may be used by a discount house in this way and to the length of life of the bonds that may be held by discount houses against borrowed money—both limits to which prudence in the discount houses themselves would anyway point. It is understood that the limit of amount is about eight times the true capital resources of the discount house concerned, and that this total must be very heavily weighted by the shorter bonds. As regards length of life, the rule is that a bond with a life exceeding five years and (rates continuing at the new levels) it will (ex-dividend) steadily rise to 100 at the maturity date a year later. If the discount house has to sell the bond in the early months (though not if it can hold to maturity) its capital loss will greatly exceed any net yield it has obtained. This example is only a crude one, because in practice considerations of dividends dates and taxation rules will greatly affect the arithmetic of profit and loss.

¹ The consolidation of the discount houses came in two distinct phases, the first occasioned by the recognition of the implications of the bond business in the thirties, and the second by the desire of the authorities to see the discount market playing a very special part in the operations of war finance. For the sake of simplicity these two phases have in the main text been telescoped into one. One of the twelve is the operator for the authorities and its capital resources are rather smaller.

should not be held against borrowed money.¹ A discount house will, however, hold only a relatively small amount of bonds having anything like as long as this to run, and very much more than half of its portfolio will ordinarily consist of bonds maturing within two years, and the remainder will have their maturities as carefully (but not evenly) spread over the remaining years as the technical availabilities of government bonds allow.

What advantages are there from a national point of view in this practice? What is the social justification for the payment of the income thus derived by the discount houses? The answer is in large part to be found in the fact that (apart from irredeemable stocks) even the longest-dated government bonds eventually become short-dated bonds, and therefore lose their appeal to the general body of investors who are looking for an investment to hold for an indefinite period of years. Given this fact, the Government wants *some* financial institutions to act as a magnet to take up bonds that are getting near to maturity. These institutions can also serve a useful purpose by acting more generally as 'jobbers' absorbing ephemeral market gluts of short bonds. Moreover, the exigencies of public finance may occasionally drive the Government to issue bonds which are short-dated at the outset. And if, for these purposes, there are financial institutions willing to hold short bonds, then the Government may as well, as a matter of policy, choose to issue some short-dated bonds and get the benefit of lower rates when these can be had (as was the case through the nineteen-thirties and nineteen-forties). Given all these circumstances, it is very convenient to have such an adaptable and financially elastic institution as the London discount market to hold the bonds on the basis of funds that the banks like to regard as almost as liquid as cash (as indeed they are).

¹ I add the qualification 'against borrowed money' because it is regarded as legitimate for a discount house to invest its own capital in longer-dated bonds.

Whether the discount houses can be expected to serve this purpose permanently is another question. All went well, to the mutual advantage of all parties, during the long period of stability of a structure of interest rates that allowed a wide margin of profit between call-money rates and the running yield on bonds. But during the nineteen-fifties these circumstances have radically changed, and the discount houses have been doubly caught. As bond yields have risen, the prices of existing bonds have dropped, implying capital loss for a discount house that sold bonds or at best discomfiture when the bond portfolio is valued at balance-sheet dates. At the same time, the rates at which the discount market borrows its money from day to day have risen far above the former bond yields (implying a running loss on any bonds remaining from earlier issues) and to equal the yields on newly-issued bonds (leaving on these no running profit for discount houses). The result has been that discount houses have been very reluctant either to sell or to buy bonds, and it cannot be pretended that they now serve any substantial jobbing function in this market. If they come round to the view that the conditions of 1951-7 were abnormal in their harshness, the discount houses may settle down again to their jobbing in short bonds; at present, it seems more probable that they will view the market with extreme caution.

What would happen if the discount market dropped out of the short-bond market? The banks would no doubt operate more than they do nowadays in short bonds; but they would feel very uncomfortable about this and, to the extent that they failed to give adequate support to the short-bond market, the central bank as the instrument of government would feel obliged to operate a great deal in short bonds. This is more or less what happened in the U.S.A. in the nineteen-forties, when the Federal Reserve System operated on a large scale in short- and medium-term bonds, absorbing them particularly when the commercial banks were shy, and unloading when the com-

mercial banks were more tempted. In this way the American short-bond market was even more stable than the London one. And it could be done in London: there are no insuperable technical difficulties. We must remember, of course, that there would have to be a few more technical experts and a few more clerks in both the commercial banks and the central bank.

Similar considerations apply to the question whether the Treasury Bills business handled by the discount market could be eliminated. The discount houses are a great convenience to the commercial banks. By their manipulation of their call loans to the market and by the readiness with which they can buy Treasury Bills of any date from the market, the banks are able to settle inter-bank indebtedness daily and to cope with the vagaries (expected and unexpected) of government payments and receipts, and to do all this without impairing their cash ratios. But differences arising in inter-bank indebtedness could be adjusted along lines similar to the dealings in 'Federal Funds' in America,¹ and now that the old prejudice against direct dealings between the Bank of England and the joint-stock banks has gone, the latter could be insulated from the irregularities of government payments and receipts—all without the intervention of this specialized body of discount houses. The liquidity of the commercial banks would *look* less, but since everyone understands the responsibilities of the central bank, liquidity would in fact be no less than it is now. In short, though the circumstances that gave birth to the discount market have in the main disappeared, its use for current purposes has its conveniences for all parties; and although on the score of its Treasury Bill operations there are no insuperable technical objections to the disappearance of the discount market, there is

¹ Member banks short of reserve funds (cash reserves) acquire from those with surplus reserves immediate deposits at the Federal Reserve Banks, returning them a day or so later. The process is essentially one of exchanging 'cash today' for 'cash tomorrow'.

all the force of a tradition of great convenience and of adaptability to the changing needs of the times.

The operations of the discount houses in Treasury Bills have also a wider importance than is apparent when we confine our vision to the great clearing banks. The London market includes a much greater number of 'outside banks', both British and foreign, and banks all over the world are in telegraphic communication with London. As financial transactions, and particularly international financial transactions, have been gradually freed from official controls, and as interest rates have become flexible not only in London but throughout the world, the movement of balances from place to place has provided fresh activity for money dealers in London. By making a lively and sensitive market in Treasury Bills (in which foreign, Commonwealth, and domestic balances are increasingly invested), and in day-to-day deposits of sterling, the discount houses do useful business. Although many of their services could conceivably be offered by the great banks, such a concentration would imply a loss of competitiveness and might well limit London's activity and strength as a leading international financial centre.

Nor must we forget that the discount houses retain a modicum of the kind of business on which they grew up and which they are peculiarly well suited to handling. This is the trade in ordinary commercial bills of exchange. There are something like £250 millions of these now (1959) in the market, and it is thought that they may become more numerous in the near future. In handling these the discount house still performs the important services referred to on pp. 50-51 above; and these could not be undertaken by the ordinary commercial banks without the expense of technical experts and clerks such as those now employed in the discount market. Again, we find that work now undertaken by the discount houses *could* be done otherwise, but it is difficult to see that it could be done more cheaply, and the commercial banks may well be right in

saying that it is work so different from their main service that they prefer to take advantage of a body of outside specialist firms. The discount houses engage the full-time services of no more than a few hundred, including typists and messengers as well as managers and specialist clerks. When allowance is made for the fact that the work would, in some way or other, have to be done anyway, perhaps this is not a high price to pay for one of the technical pillars of London's position as a leading international financial centre.

CENTRAL BANKING: CONSTITUTIONAL QUESTIONS

1. The Central Bank as an Organ of Government

THE central bank is the organ of government which undertakes the major financial operations of the Government and which, by its conduct of these operations and by other means, influences the behaviour of financial institutions so as to support the economic policy of the Government. As a matter of history these functions have been developed in various countries by institutions which were more or less like commercial banks, and many of their operations nowadays are still of a banking nature; hence the inclusion of the word 'bank' in the term 'central bank' by which such an institution is described. But central banks are different from commercial banks in certain vital respects. First, they are governed by people who are more or less closely connected with other organs of government. Secondly, they do not exist to secure the maximum profit, which is the proper long-run aim of a commercial bank. Thirdly, they must have a special relation with the commercial banks whereby they are enabled to influence these in implementation of the Government's economic policy.

It follows, from the fact that the central bank is an organ of government, that it must be in some sense a part of the government machine and that its actions should be clearly co-ordinated with those of other executive branches of government. Nevertheless, traditionally high importance has been attached to the 'independence' of the central bank, even to the extent of insistence on private ownership and non-governmental appointment of its chief officers.

This view was particularly influential in the nineteen-twenties, when the theory of central banking was being rapidly developed and accepted; it has been gradually breaking down since that period, but has never entirely disappeared. The case for giving to the central bank some special constitutional position rests on the fact that it is (as we shall see in the next chapter) the creator of cash, and thereby offers standing temptation to improvident governments. The advantages such governments enjoy, when they resort to easy finance at the central bank, are immediate and obvious; the disadvantages are not so readily perceived, but in the long run they are cumulative and can be disruptive to economic society. In recognition of this, most countries (including our own) have not been willing to reduce their central banks to the position of an ordinary department of government. The need to integrate the policy of the central bank with the broad economic policy of the Government is generally accepted, but the central bank retains a special status which is something rather more than freedom to conduct its daily technical operations unhindered. It is rather, in the words of an outstanding Governor of the Bank of England, that the central bank has 'the unique right to offer advice and to press such advice even to the point of nagging; but always of course subject to the supreme authority of the Government'.

The constitutions of central banks, as they exist today, reflect in varying degree acceptance of this view. To some extent the variations, from country to country, reflect national differences of view about central banking and are related to differences in the institutional environment in which their central banks have to work. But in the main, the variations reflect the world fashions about central banking which happened to prevail when the particular central banks were chartered or re-chartered. Sometimes the laws governing a central bank have become so out of accord with prevailing ideas that the central bank is re-chartered, as happened in the nineteen-thirties in the United States

and many other countries. Or the power of the State to re-charter may lead to the written constitution being superseded by unwritten conventions more in keeping with prevailing ideas, as happened in England during the decades preceding the nationalization of the Bank of England in 1946.

II. *The Bank of England*

The central bank in this country is the Bank of England.¹ The Bank of England was originally a joint-stock company, established in 1694 by Act of Parliament, and the entire capital stock was acquired by the State under the Bank of England Act of 1946. Its affairs are regulated by a Governor, a Deputy-Governor, and sixteen Directors appointed by the Crown. The Governor and Deputy-Governor hold office for five years. The Directors hold office for four years, four of them retiring each year; not more than four of them may be full-time officers. All of these officers are eligible for reappointment and there is no provision for compulsory retirement, but it has been stated that normally no person over sixty-six years of age will be appointed. The Act of 1946 stipulates that members of the House of Commons, Ministers of the Crown, civil servants, and aliens may not be appointed to any of these offices; apart from these restrictions the Crown (acting of course on ministerial advice) is left entirely free to select people from any walk of life.

The effective managing body of the Bank now consists of the Governor, the Deputy-Governor, and the four full-time executive Directors. The present holders of these offices may all be described as professional central bankers,

¹ The Bank of England is in some sense the central bank not only of England but of the entire United Kingdom of Great Britain and Northern Ireland, but its control over the Scottish and Ulster banks is only indirect and these countries are to be regarded rather as the inmost members of the 'Rest of the Sterling Area' (see pp. 118-20 below). On this basis it is reasonable to think of the Bank of England as simply the central bank of England. It should be emphasized that this is a simplification.

in the sense that they have spent a considerable part, if not the whole, of their careers in the service of the Bank. This need not invariably be the case; but in present circumstances it is necessary for most of these six full-time people to have that familiarity with the Bank's business which can come only from long years of service in the Bank. In the appointment of the twelve part-time Directors the Crown has fairly closely followed the selections of the inter-war period, when the old (private) Court included not only City merchants and merchant bankers but also distinguished men from industrial and commercial fields. The appointment in 1949 of the vice-chairman of one of the ordinary commercial banks broke a very long tradition that the ordinary banks should be unrepresented in the Bank's Court of Directors.

Under the Act of 1946 responsibility for the conduct of the Bank is placed upon the Court as a whole, and although day-to-day activity is concentrated in the hands of the Governor and his full-time colleagues, the Governor must see that he carries the Court with him (after the event if need be) in all his major decisions. For more constant advice the Governor has at hand the 'Committee of Treasury'. This Committee consists of the Governor and his Deputy and five Directors who are chosen by all the Directors in a secret ballot. It follows a long tradition in being the senior Committee of the Bank,¹ but its authority has diminished since the appointment of full-time Directors to assist the Governors, a change that marks the 'professionalization' of central banking. The constitution of the Bank, based on the Act of 1946, thus provides

¹ It goes back to the very early days of the Bank, and was originally 'the Committee to wait upon the Lord Treasurer'—in the days before the Treasury went into Commission—and, because in the early days business with and for its largest customer (the Government) absorbed the main energies of the Bank, the Committee soon attracted to itself all the Bank's major problems, irrespective of their relation to government business. Over a long period membership consisted of the Governor and Deputy and those Directors who were ex-Governors.

for the management of the Bank effectively by the Governor and a small group of professional central bankers, reinforced by the counsel of men who have earned wide respect in varied spheres of economic activity.

The Bank remains a corporate body whose powers are regulated by its charters, just as an ordinary joint-stock company's powers are regulated by its Memorandum of Association. The powers under the charters are very wide, and the operative restrictions on its activities were, until the recent Act, mainly self-imposed conventions that had grown as the Bank had developed its work as the central bank. The Government of the day for a very long time had always had some influence, and this influence grew significantly after 1914, and especially after about 1931. Treasury and Bank were already well used to working hand-in-glove before 1946, but only by Clause 4 of the 1946 Act has the relationship acquired specific statutory authority. The first two sub-clauses of Clause 4 are as follows:

(1) The Treasury may from time to time give such directions to the Bank as, after consultation with the Governor of the Bank, they think necessary in the public interest.

(2) Subject to any such directions, the affairs of the Bank shall be managed by the court of directors in accordance with such provisions (if any) in that behalf as may be contained in any charter of the Bank for the time being in force and any bye-laws made thereunder.'

It should be noted that the Governor has a statutory right to be consulted before a direction is issued, but he is not given power to veto it.¹ The Treasury retains the ultimate responsibility, but the provision about consultation ensures that it will not discharge that responsibility without having taken advice from the quarter technically most competent. In fact, Treasury and Bank have learned to work so closely together that these legal forms have little practical meaning.

¹ In short, the 'Old Lady of Threadneedle Street' retains her 'right to nag' (cf. p. 65).

The most important innovation of the Act of 1946 lies in the remainder of Clause 4, whereby the Bank of England is endowed with statutory powers to direct the affairs of the commercial banks. Hitherto the Bank of England had had to rely on the art of persuasion and, in war-time, on the bankers' knowledge that the Treasury could, if necessary in support of the Bank of England, issue Regulations under special war-time powers. Sub-clause (3) reads:

'The Bank, if they think it necessary in the public interest, may request information from and make recommendations to bankers, and may, if so authorized by the Treasury, issue directions to any banker for the purpose of securing that effect is given to any such request or recommendation:

Provided that:

(a) no such request or recommendations shall be made with respect to the affairs of any particular customer of a banker, and

(b) before authorizing the issue of any such directions the Treasury shall give the banker concerned, or such person as appears to them to represent him, an opportunity of making representations with respect thereto.'

There are thus two limitations upon the Bank of England's power. First, the compulsion must have the support of the Treasury (to which the banker under compulsion has right of direct access) which is, through the Chancellor of the Exchequer, answerable to Parliament. Secondly, directions must relate to the whole business or to a whole class of business of a commercial bank, and not to its business with a particular customer. The latter restriction was imposed in protection of the traditional privacy of the banker-customer relationship and, since the central bank's objects refer to whole classes of business, is not detrimental to central bank control of the monetary situation. The former restriction serves to emphasize the dependence of central banking upon government control and (like sub-clause (1)) ensures that the Treasury shall exercise compulsion only in full cognizance of the views of the compelled party.

What is most noteworthy is not, however, the limits set to the Bank's powers over the other banks, but the breadth of these powers. Central-bank legislation in other countries has generally set out in considerable detail the powers of the central bank and has supported them by specific statutory restrictions on the other banks, notably by compelling the latter to maintain 'fixed ratio' reserves at the central bank. Outside these specific statutory powers the central bankers have had to rely (as did the Bank of England before 1946) upon persuasion and co-operation, coupled sometimes with the knowledge that legislators would in the last resort intervene to support compulsion of recalcitrant bankers. The Bank of England is now operating under no such restrictions—it can issue directions compelling bankers, for example, to hold certain reserves with itself, to vary those reserves, to alter their charges for any class of business. It may compel the bankers to favour one industry or group of industries as borrowers.¹ In the exercise of all these powers the initiative rests solely with the Bank of England, but the Bank cannot exercise compulsion except with Treasury support. Given Treasury support, the Bank's powers are unparalleled elsewhere. Their only limitation of general importance is in fact that imposed by the responsibility of the Chancellor of the Exchequer to Parliament, not only for the exercise of compulsory powers but also for advice tendered to the Crown on the appointment of the Governor, Deputy-Governor, and Directors.

Though its formal powers are thus very considerable, the position in fact remains that the Bank exercises its influence mainly by informal communication and persua-

¹ In the debates in the House of Commons, preceding the enactment of the nationalizing Bill, the then Chancellor of the Exchequer, referring to the exercise of these wide powers, said '... it may be desirable, in certain circumstances, to urge the banks to devote their resources to one or other form of investment which it was felt by the Government and by the Bank of England was necessary in the interests of a planned priority, with a view to securing full employment in the country and building up our export trade and other necessary elements in our economy'.

sion behind the scenes. There are now recognized channels of communication between the Bank and the various sections of the market. The Clearing Banks (those London banks whose business is predominantly English—the 'Big Five' and a handful of others), for example, have two Committees—one of their Chairmen, and one of their General Managers, and the Governor of the Bank will ordinarily communicate with the banks through the Chairman of the Chairmen's Committee or the Chairman of the General Manager's Committee, according to the subject of his communication. There are similarly the Accepting Houses Committee and the Discount Market Association, and through these organizations and numerous personal contacts the Bank of England keeps its finger on the City's pulse and can secure compliance with its wishes without any resort to legal action. The Treasury has little direct contact with any part of the market, but communicates normally through the Governor of the Bank.

One notable peculiarity of the Bank's present constitutional position is the absence of an informative Annual Report. As one of the 'nationalized industries' it does publish an Annual Report, but it is a bare and boring document, doing scarcely more than reproducing figures already available elsewhere. In this respect it is not only unique among the nationalized industries (some of which have not only published very thorough Annual Reports but have also had to submit to full-dress Parliamentary debate upon them) but it is also distinguished from most of the other central banks in the world. Those of the U.S.A., Canada, and Australia in particular publish annual reports that are extraordinarily informative and important in educating public opinion in the requirements of economic policy. To the outsider it does seem a great pity that the Bank of England, with its unrivalled knowledge, should not publish an annual commentary upon events and explanation of its policy and views. Experience in the nineteen-fifties, when the Bank has been experimenting again with Bank Rate

and other measures of 'a flexible monetary policy', has seemed to underline the disadvantages of the Bank's traditional silence. The Radcliffe Committee in 1959 strongly recommended that the Bank's Annual Report should be developed into a more effective organ of information on the Bank's activities.

III. *The American and other Central Banks*

The central bank of the United States of America is a system of twelve connected banks called the Federal Reserve Banks. The system was founded in 1913, but the period intervening between 1913 and the present has seen such changes in ideas about central banking that the amended constitution of the system is already a mixture of anomalies based on historical forces. For a full understanding of the constitution of the system readers should look into some of the historical works:¹ here we are concerned simply to outline the system in the light of our general discussion.

The Federal Reserve System consists of twelve Federal Reserve Banks, each having one geographical section of the country as its sphere of operations. The capital of the Reserve Banks was subscribed by the 'member banks' in its region. Member banks are all those commercial banks which are obliged by law, or are induced, to attach themselves to the system, and such are the laws and the inducements that nearly all large banks and many of the small ones are member banks.² The member banks have a shadow of control over the functioning of the System in that they elect some of the Directors on the local Boards—the Boards of the individual Reserve Banks. But all fundamental central banking operations are under the control of a central body, the Board of Governors of the Federal Re-

¹ The best general work in recent years is E. A. Goldenweiser's *American Monetary Policy* (1951).

² Member banks hold about 86 per cent. of the total deposits of all commercial banks.

serve System, and it is to the constitution of this body only that we need attend. The Board of Governors consists of seven members appointed by the President, subject to the approval of the Senate, for terms of fourteen years. Among these seven are the Chairman and Vice-Chairman, selected by the President with the approval of the Senate and serving four-year terms. This governing body has effective control not only directly over all the most important business of the entire system but also over the appointment of the officers of the individual Reserve Banks. The American central bank is thus directed by men appointed for fairly long terms, and appointed by the Government of the country.

It is prescribed by law that the Federal Reserve Banks shall withhold a certain part of their profits as reserve capital. Stockholders may be paid a cumulative dividend of 6 per cent. per annum. Out of any remaining profits certain relatively small payments are made to the Federal Treasury and the rest is retained as surplus by the Reserve Banks. The possibility of great changes in profits occurring as a result of the price of gold being changed has been obviated by the Treasury's taking over the entire gold reserve.

The Bank of France was until 1945, like the Bank of England, an ordinary shareholders' bank; but the Governor and his Deputies were appointed in effect by the Government of the day and held office during the pleasure of that Government. The shareholders had the right to elect Directors (regents) and other important officers, and it was through these elections that the celebrated 'two hundred families' maintained such great influence in the counsels of the bank. But already before 1939 circumstances tended to increase the control exercised by the Government and it had become customary for the Governor to be changed on every important change of Government. In the Fourth Republic the State has assumed complete formal control.

In the general run of central banks established between the wars ordinary shareholders' ownership has been common, though there are cases of the commercial banks' having been called upon to provide the capital. In either case dividends are limited by law, surplus profits going to the Government.

Where special profits or losses have been incurred by the operations of the central bank there is sometimes *ad hoc* legislation providing for the special profit or loss to benefit or be borne by the Government. Examples of this have been the legislation which provided for the Government bearing the loss suffered by the Reserve Bank of South Africa in 1931, when part of its reserve lost value on the London pound's departure from gold; and the numerous cases of Governments taking the profit when gold reserves were 'written up' during the nineteen-thirties.

Three interesting exceptions to the general rule of ordinary shareholders' or commercial banks' ownership are the Bank of Canada, the Reserve Bank of New Zealand, and the Bank deutscher Länder. The first and second were originally established with share capital provided by general public subscription. But more radical governments coming into power wished to increase political control over the central banks, and in New Zealand the entire share capital was compulsorily sold by the public to the Government. In Canada the Bank of Canada was obliged to issue new capital just exceeding the old capital to the Government, and eventually the private shareholders were bought out. In Western Germany the central bank is wholly owned by the provincial 'central banks' whose capital is owned by the related provincial governments.

Systems for appointing Directors vary widely. Sometimes the shareholders have most of the control, in which case the system tends to develop into one of the old Board co-opting new members, as in the pre-1946 Bank of England. Sometimes the Government has more or less power

over the appointment of Directors. Five- and seven-year terms of office are common. Frequently the charter of the central bank prescribes that the Directors shall be chosen from certain classes of people. A common provision, for example, is that so many Directors shall be representative of commercial interests, so many of agricultural interests, so many of manufacturing interests, and so forth. The Federal Reserve system used to have its Directors chosen largely on these lines, and vestiges of it remain in the local boards.¹ Sometimes the Directors must be selected as representative of particular geographical sections of the country. Provisions of this kind are intended to ensure that the central bank shall have due regard, in determining its policy, to all important interests of the country. It is sometimes argued that the system of 'representatives' of different interests must tend to exaggerate disunity within the Board, as a compromise of views is less easy when men feel that they are there to watch the interests of different bodies of people. It is significant that changes in American law have whittled down the representation of particular interests in the government of the Federal Reserve System. One of the advantages of the more informal method of choice is that Directors may in practice be chosen from various fields without being obliged to feel that they are on the Board to represent the particular interests of the industries from which they come. All sides of a case are just as likely to be put forward; but there is more chance of compromise where the 'representation' is less formal. Occasionally it is provided that the Secretary of the Treasury shall be an *ex officio* Director, though not always with a vote. In Western Germany the system of appointing Directors is unique and reflects the extraordinary structure of the central banking arrangements; its effect is to emphasize the day-to-day independence of the central bank.

¹ As lately as 1951 this system of representation was reintroduced in Australia.

The Governor and his Deputy are more often than not appointed by the Government for terms of seven years or so. Alternatively the election of the Governor is subject to Government approval, the system in the Reserve Bank of India being a complicated one of this kind. The distribution of power between the Governor and subordinate executive officers on the one hand and the Board of Directors on the other varies; in general most of the power is in the hands of the Governor. This sometimes perhaps results from the Directors representing conflicting interests and so not forming an harmonious body. Often it is the effect of the enormous area from which the Directors are drawn. In India an attempt has been made to deal with this problem by establishing Local Boards of Directors (at Delhi, Calcutta, Bombay, and Madras), but the consequent lack of cohesion in the Directing body is bound to leave most of the effective power in the hands of the Governor and other senior full-time executives. This is more likely in those cases where the Governor is, but Directors are not, appointed by the Government. In general it may be said that the tendency in most countries (including Britain) is to increase the power of the Governor and his full-time assistants at the expense of Directors who are tending to become mere consultants.

THE DOMESTIC OPERATIONS OF THE CENTRAL BANK

1. *The Bank of England as the Central Bank*

SOME of a central bank's work consists of telling other institutions what they may or may not do ('controlling'), and some consists of advising other institutions (mainly other organs of government) what they should do, but these functions, important as they are, derive from its fundamental task of operating in markets. The central bank is the market operator standing between 'the public sector' (to which it belongs) and 'the private sector'. Its power to operate is based on the fact that its own liabilities (its own 'promises to pay') are the 'cash' on which the entire banking structure of the country rests. The central bank makes cash payments, and receives cash, in settlement of transactions purely internal to the country; we shall discuss these transactions in the present chapter. It also makes cash payments, and receives cash, in settlement of transactions which arise from the business which firms and individuals have with other countries; this 'external' or 'foreign exchange' business we shall discuss in the next chapter. Transactions of both these classes give rise to a net inflow or a net outflow of cash to or from the central bank and it is basically by influencing these inflows and outflows—and so altering the cash basis of the banking system—that the central bank is able to influence the behaviour of banks and other financial institutions. We must therefore begin by looking more closely at the nature of cash, and at the central bank's operations in it. Through the remainder of this chapter the explanation will be in terms of the operations of the Bank of England, for it is in

England that the possibilities of central banking have been most fully developed. Some aspects of central banking in the United States, and others special to countries with undeveloped financial institutions, are discussed in later chapters.

The important operations of the Bank of England must be discussed in terms of a few major headings in the Bank of England's published statement of account. This is a statutory form, known as the Bank Return, and deriving its odd shape as a combination of two balance-sheets from the ideas of 1844 which have little or nothing to do with modern central banking. Of these items, 'Bankers' Deposits' represents the balances held by the London Clearing banks at the Bank of England; like an individual's bank balance, they can be drawn upon for transfer to another customer or for the purpose of obtaining notes and coin. Secondly, as the gateway between the public sector and private sector, the Bank of England holds the principal banking account of the Government: its balance appears among the Bank's liabilities as 'Public Deposits.' (It is by transfers from Public Deposits to Bankers' Deposits, or vice versa, that residual claims against the government, or residual claims by the Government, are settled.) Thirdly, there are 'Other Deposits: Other Accounts' which are the balances of other customers. This part of the Bank's business includes a vestige of ordinary banking business for private customers. Also, more importantly, 'Other Accounts' include balances in favour of Commonwealth and foreign central banks or other more or less official bodies; changes in these have some significance in relation to external transactions, but they are generally quickly compensated by transactions in Treasury Bills and, like the rest of 'Other Accounts', they may be ignored in our review of the Bank's domestic operations.

The only other liability of any importance consists of the *Notes* issued by the Bank—our familiar £5, £1, and 10s. notes, as well as some of larger denominations which

do not emerge in circulation. The issue of all these notes is subject to the Currency and Bank Notes Act of 1954, in accordance with which there is at present (July 1959) a *Fiduciary Issue* of £2,150 millions. The whole of this Fiduciary Issue appears as a liability of the Issue Department in the Bank Return, but a small part (£27 millions on 1 July 1959) reappears, being notes still resting in the Bank, as an asset of the Banking Department in the Bank Return. These notes 'in the Banking Department' are available for the Bank to pay out to the London clearing banks if these require more cash for public circulation or for their own tills. All the rest of the notes are 'in circulation'—that is, outside the Bank of England itself.

Against these various liabilities the Bank shows in its Bank Return an equal total of assets. These include a portfolio of government securities held 'in the Issue Department', to which we shall have to return, and a rather more varied assortment of assets 'in the Banking Department'. Of the latter, some are labelled *Government Securities*. This item consists of Treasury Bills, some other government securities such as would appear as 'Investments' in the balance-sheets of the clearing banks, and 'Ways and Means Advances' which are temporary loans, of an ordinary banking kind, to the Government. The total of government securities in the Bank can be changed at any time on the initiative of the Bank, usually by the purchase of Treasury Bills from the Exchequer or (through 'the back door') from the discount market.

The other important item on the assets side is *Other Securities*. This is subdivided into *Discounts and Advances* and *Securities*. Under Discounts and Advances there are three items, the individual magnitudes of which we do not know—one or another of them may sometimes stand at zero. First there are two items arising out of the Bank's ordinary banking business. These two items are bills of exchange discounted outright for the Bank's own customers, and advances made either by overdraft or loan to the

Bank's own customers. The third item shows similar transactions with the discount houses arising not out of the Bank's ordinary banking business with ordinary customers but out of its traditional operation as lender of last resort.¹ This distinction between the Bank's ordinary customers and the members of the discount market should not be understood to imply that the members of the discount market are not in any sense 'customers' of the Bank of England. The discount houses must in fact always keep accounts open at the Bank of England, but the Bank's relations with them have a significance entirely different from that of its relations with those non-financial houses and individuals who bank with the Bank of England as though it were an ordinary bank.

The second part of the general item Other Securities is called *Securities*. It consists of non-British government bills, bonds, &c., which the Bank of England has acquired on its own initiative. Among these securities are parcels of bills bought by the Bank from discount houses, who are expected to put into such parcels a representative selection of the non-Treasury Bills handled by them.² There are also shares and debenture stocks which the Bank obtained when, during the inter-war period, it played a prominent part in industrial development and reconstruction.

II. *The Bank of England as the Source of Cash*

The importance of the Bank of England's liabilities and assets, which we have just outlined, rests on their relevance to the cash basis of the banking system. The power of the Bank of England over the commercial banks is derived from two facts: (i) the regard paid by the commercial banks, in the regulation of their most important operations,

¹ At the official Bank Rate.

² This arrangement, of long standing, enables the Bank of England to keep some check on the *quality* of the commercial transactions covered by the activities of the Accepting Houses and other London acceptors.

to the size of their cash reserves, and (ii) the position of the Bank of England as the source of cash. The former has already been explained in Chapter 2 and will be further discussed in Chapter 9. Before we can finally consider how the Bank of England regulates the supply of cash, we must explain how the Bank of England is the source of cash. In this there are four steps: first, 'cash' has to be defined and classified into Notes and Bankers' Deposits at the Bank of England; secondly, the relation between these two kinds of cash and the operation of the Bank of England as a banker (with the other banks as its depositing customers) are outlined; thirdly, we must look into the regulation of the note issue; and fourthly, the other facet of the Bank's position as bankers' bank—its operation as 'Lender of Last Resort'—must be explained. Only then shall we be in a position to understand how the Bank of England can control the supply of cash, and what power flows from this control.

What is cash? There are two forms of cash. The first is any more widely acceptable form of money into which people may wish to change their less widely acceptable bank deposits. The 'liquidity' of a bank is its ability to exchange deposits for cash of the first form when demanded by the public. The second form of cash consists of anything that a commercial bank considers as liquid as the first form. These definitions are extremely awkward; but they are, I believe, as little awkward as is consistent with true general statement of the present position. When we turn from the general definitions to apply them to English conditions our statements become more familiar. Cash of the first form consists of all legal tender money—silver and copper coin and Bank of England notes—this being the most widely acceptable form of money. Cash of the second form consists of the Bankers' Deposits at the Bank of England. In the course of decade after decade of trust in the Bank of England, because the Bank has always been able to offer its own notes in exchange for deposit claims

entered in its books, there has arisen the tradition that the Bankers' Deposits are as useful to the commercial banks as are Bank of England notes.

'Cash' in England may be reclassified as first, the silver and copper coin provided by the Mint at the instance of the Bank of England, and second, certain liabilities of the Bank of England—the bank notes and the Bankers' Deposits. Of these two classes of cash the first is unimportant—the amount of it varies little and, since banks and public alike endeavour to minimize their holdings of such a bulky form of money, no significant change in the total supply of money can be initiated by varying the supply of silver and copper coin. With bank notes and Bankers' Deposits the position is quite different. If these liabilities of the Bank of England are increased there may be an important increase in the supply of money. The commercial banks regulate their acquisition of earning assets, and therefore the creation of bank deposits, with an eye on their cash reserves. An increase in the notes and 'cash at the Bank of England' held by the commercial banks leads to an increase in the aggregate of bank deposits, and vice versa. If it can control the notes in the commercial banks' tills *plus* the Bankers' Deposits with itself the Bank of England can control the aggregate of bank deposits in the country.¹

At this point we must recognize the fact that as the system works today the bank notes have become very much like silver and copper coins in that they behave as small change. The Bank of England does not ever by its own action directly add to the notes held by the commercial banks. The latter send round to the Bank of England for more or send some notes back as they choose, adding to or subtracting from their book balances at the Bank, just as members of the public draw notes from the commercial

¹ For further explanation of the relation between the operations of the Bank of England and the total volume of bank deposits see Chapter 9 below.

banks in exchange for bank deposits, or take notes to the bank and have their bank deposits increased. The Bank of England allows the commercial banks to draw out or pay in notes as they choose. When the commercial banks are drawing out notes the Bank Return shows, on the liabilities side, a decrease in Bankers' Deposits and, on the assets side, a decrease in Notes, and contrariwise.

To the commercial banks, bank notes, like deposits at the Bank of England, are idle assets. They want them only to meet the demands of the public and to provide what they consider adequate till money. Accordingly they customarily restrict their holdings of notes to about 4 per cent. of their deposit liabilities to the public. If they draw more notes from the Bank of England it is either because the public are wanting more for circulation or because their aggregate deposit liabilities have risen. Leaving aside the public demands for the moment let us remember that the deposit liabilities of the banks to the public will be determined by the action of the banks in acquiring assets. The banks will not have increased their assets, so increasing deposits, unless their cash reserves have increased. As their note holdings had, as deposits increased, fallen short of the customary 4 per cent., the other part of their cash reserves—Bankers' Deposits at the Bank of England—must have increased. If the Bank of England can determine the volume of Bankers' Deposits with itself, and can supply whatever volume of notes is appropriate to that level of Bankers' Deposits, the Bank of England will be controlling the general operations of the commercial banks.

If the change in the commercial banks' cash reserves is initiated by the public the chain of events is somewhat different, but the influence is the same. Suppose, for example, that members of the public are demanding more notes for circulation. As they draw notes across the bank counters their deposits go down as their holding of notes goes up. The position of the commercial banks is simply the obverse of this: their deposit liabilities to the public

84 DOMESTIC OPERATIONS OF CENTRAL BANK

are going down and their aggregate cash reserves are going down *by the same absolute amount*. The cash ratio has therefore fallen below the usual figure: the ratio of notes to deposits is very much lower and this is only partly compensated by the rise in the proportion that Bankers' Deposits bear to deposit liabilities (there being no initial change in the absolute amount of Bankers' Deposits). Then, if the Bank of England takes no action, the commercial banks will set about contracting earning assets, and so contracting deposits further, to the level appropriate to the new level of total cash. They will also draw some notes out of the Bank of England, Bankers' Deposits and Notes at the Bank of England both declining, while the composition of the commercial banks' cash reserves once more assumes its normal complexion. Let us picture this in a highly schematic arithmetical example:

POSITION I

(All figures in millions of £)

Bank of England Banking Department

Bankers' Deposits	.	.	240	Notes unissued	.	.	70
Other Liabilities	.	.	130	Other Assets	.	.	300
			<u>370</u>				<u>370</u>

Commercial Banks

Deposits	.	.	.	6,000	Cash at Bank of England	240
					Cash in tills	240
					Earning Assets	5,520
				<u>6,000</u>		<u>6,000</u>

Ratio, Total cash: Deposits	.	.	.	8 per cent.	} approx.
Ratio, Cash at Bank of England: Deposits	.	.	.	4 per cent.	
Ratio, Cash in tills: Deposits	.	.	.	4 per cent.	

POSITION II

(after public has drawn £50 m. notes into circulation)

Bank of England Banking Department

Bankers' Deposits	.	.	240	Notes unissued	.	.	70
Other Liabilities	.	.	130	Other Assets	.	.	300
			<u>370</u>				<u>370</u>

<i>Commercial Banks</i>			
Deposits	5,950	Cash at Bank of England	240
		Cash in tills	190
		Earning Assets	5,520
	<u>5,950</u>		<u>5,950</u>
Ratio, Total cash: Deposits		7 per cent.	} approx.
Ratio, Cash at Bank of England: Deposits		4 per cent.	
Ratio, Cash in tills: Deposits		3 per cent.	

POSITION III

(after commercial banks have reacted to fall in cash reserves)

<i>Bank of England Banking Department</i>			
Bankers' Deposits	215	Notes unissued	45
Other Liabilities	<u>130</u>	Other Assets	<u>300</u>
	<u>345</u>		<u>345</u>

<i>Commercial Banks</i>			
Deposits	5,375	Cash at Bank of England	215
		Cash in tills	215
		Earning Assets	4,945
	<u>5,375</u>		<u>5,375</u>
Ratio, Total cash: Deposits		8 per cent.	} approx.
Ratio, Cash at Bank of England: Deposits		4 per cent.	
Ratio, Cash in tills: Deposits		4 per cent.	

Position III may never be reached. For if the commercial banks feel confident that the notes will be coming back from the public directly, they will not bother to disturb their earning assets. When the public 'pay the notes into their accounts' again the banks simply revert to Position I. This is what must happen to some extent every day the banks are open. In the morning spenders of money are drawing notes out to meet the day's needs. The notes pass into the hands of tradesmen. Just before three o'clock all the tradesmen's cashiers run round to the bank and in go the notes again. More notes are paid in first thing next morning, perhaps partly through 'night safes'. The banks perhaps approximate to Position I at 10.30 a.m., move towards Position II until 2.30 p.m., then until shortly after

opening time on the following morning they are moving back to Position I. The same thing happens at week-ends. On Friday afternoon the employers' cashiers go to the banks and draw out notes, these notes being paid out in wages that evening or Saturday morning. During Saturday afternoon and evening the workers and their wives are paying the money to tradesmen, and on Monday morning to the rent-collectors, and back come the notes into the banks. On Friday morning and again on Tuesday morning the banks are in Position I, but they had moved to Position II by Saturday morning and then back again.

It is perhaps by now apparent to the critical reader that the word 'notes' has been used throughout the last few paragraphs to mean 'Bank notes *plus* silver and copper coin'. This is true even of the simplified accounts in the example. The silver and copper coin is a small part of the total, but it behaves in precisely the same way. It is, as we shall see when discussing the regulation of the note issue, the Bank's business to see that it always has an adequate reserve of notes and coin to meet the demands of the commercial banks. But notes and coin are alike in their behaviour. Notes behave as the 'small change' to bank deposits.

In deciding whether to pass to Position III the banks have to consider whether their cash ratio is unduly low for the moment only. But there is another possibility open, which will avert the necessity of passing to Position III even when the banks feel obliged to restore the cash ratio. The drop in the cash ratio has occurred because, in the face of a public demand for more cash for circulation, the Bank of England has remained purely passive. If, however, it is within its power to force an appropriate increase in Bankers' Deposits the cash ratio will be maintained. The commercial banks will find the composition of their cash unusual, till money being short; but they can replenish it by drawing on their deposits at the Bank of England. The final position is then as below:

POSITION IIIA

(after the Bank of England has provided more cash)

(£ millions)

Bank of England Banking Department

Bankers' Deposits . . .	238	Notes unissued . . .	22
Other Liabilities . . .	130	Other Assets . . .	346
	<u>368</u>		<u>368</u>

Commercial Banks

Deposits	5,950	Cash at Bank of England	238
		Cash in tills	238
		Earning Assets	5,474
	<u>5,950</u>		<u>5,950</u>

Cash ratios: as in Positions I and III

In this position the banks have not reverted entirely to Position I. The volume of deposits is smaller by the £50 millions that the public offered in exchange for the notes taken into circulation. The total supply of money of all kinds in the hands of the public will, however, be the same as in Position I—the notes in circulation being up by the same amount as deposit liabilities of the commercial banks are down. This result may be desired by the Bank of England; but it may prefer a position in which the earning assets of the commercial banks are undisturbed. In this event the Bankers' Deposits must be forced back to the original £240 millions level, and the Bank of England will lose £2 millions more of notes to the commercial banks. The latter will revert precisely to Position I; but the Bank of England's position will be somewhat different:

POSITION IIIB

(£ millions)

Bank of England Banking Department

Bankers' Deposits . . .	240	Notes unissued . . .	20
Other Liabilities . . .	130	Other Assets . . .	350
	<u>370</u>		<u>370</u>

Commercial Banks

(as in Position I)

The reader can easily reverse the figures in order to follow the effects of the public's paying notes into the banks.

Whatever the public's action in drawing notes from or paying notes to the commercial banks, the Bank of England has control over the situation *provided that it can manipulate Bankers' Deposits at will*. Our analysis of the effects of a flow of notes from the banks to the public has been designed simply to show that, whatever the public is requiring in the way of cash, the volume of deposit liabilities of the commercial banks depends upon Bankers' Deposits at the Bank of England. How can the Bank of England control this figure?

The reader will perhaps already have noticed the clue to the answer in a certain difference between Position I and Position IIIB above. In the Position IIIB the commercial banks stand in precisely the same position as in Position I. In the Bank of England the liabilities' side is the same in the two positions; but the composition of the assets side is different. Between Position I and Position IIIB the notes resting in the Bank of England have gone down by £50 millions, this amount having passed through the commercial banks to meet the increased demands of the public. The item 'Other Assets' has increased by £50 millions. The Bank of England has increased its earning assets by £50 millions, to provide the increase in cash required for circulation. These 'Other Assets' are Government Securities and the two classes of 'Other Securities'. The Bank, that is to say, provides additional cash by buying securities. The change can occur through the commercial banks calling in money-market loans, the discount houses being forced into the Bank, and Discounts and Advances rising. But if the Bank wants deliberately to help the banking system to provide the increase in cash without disturbance, it can do so by buying Government Securities. In the latter event it is said to have engaged in 'Open Market Operations'. The term Open Market Operations also

covers the converse process, when the Bank sells securities in order to reduce Bankers' Deposits. In these operations¹ the Bank takes the initiative of fixing the rate at which it will operate in Treasury Bills and then takes in or puts out the amount of securities (Treasury Bills) necessary to release or absorb the right amount of cash for preserving market rate at the chosen level.

Just as the commercial banks in fact control their deposit liabilities to the public by acquiring assets of various kinds, offering book balances in exchange, so the Bank of England controls the level of its own liabilities by controlling the volume of its assets. A change in its assets sometimes simply occurs because the Bank of England complies with the wishes of the people who come to it offering assets—e.g. bills of exchange, just as a commercial bank can change its assets by the bank manager's sitting in his office and saying that Mr. X may overdraw his account as he desires, or by the cashier's accepting notes offered over the counter. Alternatively the Bank of England can change its assets by going out into the market seeking securities or some other assets, just as the commercial bank can add to its assets by buying government bonds through the Stock Exchange, or by buying new offices from a builder.

The control of assets gives the Bank control over its total liabilities. But Bankers' Deposits, which we have seen as regulators of the commercial banks, are not the only liabilities of the Bank of England. There remain the items Public Deposits and Other Deposits (Other Accounts). A rise in the Government's balances while the Bank of England's total assets (and therefore total liabilities) remain the same implies a fall in Bankers' Deposits. By itself every payment made to the Government has this effect and every payment made by the Government has the opposite effect. If, the Bank of England's assets remaining unchanged, payments to the Government exceed payments

¹ For some explanation of these operations see pp. 100–106 below.

by the Government, Public Deposits rise while Bankers' Deposits fall. This fall implies a decline in the cash ratio of the commercial banks. Any decided change of this kind would lead the commercial banks to make other balance-sheet adjustments and ultimately contract credit somewhat. A movement in Other Deposits (Other Accounts) would work in the same way, though such movements are rarely pronounced or prolonged. If the Bank of England, seeing the composition of its liabilities change, is unwilling to allow the disturbance to affect the operations of the commercial banks, it must manipulate its total assets (and therefore its total liabilities) in such a way as to counteract the effect on Bankers' Deposits of the change in, say, Public Deposits. If, for instance, heavy tax payments raise Public Deposits the Bank must expand its total assets, so that total liabilities are increased by the same amount as Public Deposits. Bankers' Deposits will then be unchanged and the commercial banks will be able to leave their earning assets undisturbed. As long, therefore, as the Bank of England is able to manipulate its total assets the existence of these liabilities other than Bankers' Deposits does not destroy the Bank's complete control over the amount of Bankers' Deposits.

We have in this section shown how the Bank of England controls the commercial banks' cash reserves in a general way only. Our answer to the question, how does the Bank of England control the amount of Bankers' Deposits? has been answered only by the general statement: By increasing and reducing its total assets. This general answer will be supplemented in Section VI by a detailed description of the mechanism by which the Bank operates on the cash basis and by further discussion in Chapter 9. But before proceeding to this stage, a gap in our argument, hitherto glossed over, must be filled. The reader will have observed that to support a given volume of Bankers' Deposits the Bank of England must be able to issue over its counter as many notes as the other banks want to hold in their tills

and as many notes as the public needs for circulation. In all the schematic examples given we have assumed that the Bank always has sufficient unused notes at its command, and it is high time to consider how the supply of notes is in fact regulated.

III. *The Regulation of the Note-issue*

As, on the basis of increases in the level of Bankers' Deposits, the commercial banks proceed to increase the total of their earning assets and so add to the total of bank deposits, it becomes necessary for them also to add to the notes in their tills, if they are to maintain the normal ratio of till money to total deposit liabilities. In order to secure this adjustment of till money to total deposits the banks exchange part of Bankers' Deposits for notes—or, in the contrary case of a contraction in deposits, notes for Bankers' Deposits. As the swelling deposits encourage rising prices and business activity, the change in the banks' till-money requirements is likely to be reinforced by changes, in the same direction, in the public's demand for notes for circulation. In regulating the volume of Bankers' Deposits the Bank of England has always to bear in mind the fact that changes in this volume will find a reflection in changing demands for notes for both banks and public to hold. The Bank of England's control of the volume of ordinary bank deposits is thus theoretically subject to its note-issuing powers.

What is true of the influx and efflux of notes at the Bank of England is equally true of the influx and efflux of smaller change—silver and copper coin. The Bank of England must always be prepared to exchange Bankers' Deposits for silver or copper coin on demand, in order that the commercial banks may always be prepared to exchange the deposits of the public for silver or copper coin on demand. The Bank of England must therefore always have an adequate supply, else its regulation of Bankers' Deposits might be cramped. The English system of providing

subsidiary coinage (for so the silver and copper coins are described by economists) does ensure that the Bank of England shall always have at its command an adequate supply. The coins are produced by the Royal Mint, which is a government department. The Royal Mint buys metals in the ordinary metal markets and engages labour, &c., to make the metal into coins. It makes its payments (just as does any other government department) by drawing on the Public Deposits at the Bank of England. It is always prepared to sell new coins on demand to the Bank of England. If the Bank of England finds that its reserves of silver coin are running low (because the commercial banks have been drawing silver coin from it) it buys some more from the Royal Mint. The Bank pays the Mint by adding the appropriate sum to the balance of that government department, so Public Deposits are increased. Meanwhile the Royal Mint is paying for its raw materials, labour, &c., by transferring its bank balance (part of Public Deposits) to individuals. This, like any other government disbursement, adds to Bankers' Deposits—indeed, it restores them roughly to the level at which they stood before the commercial banks drew on them to obtain the silver coin wanted by the public. There is no restriction on the supply of this money. The Bank of England, in regulating the volume of Bankers' Deposits, need never stop to think whether it will be able to supply the appropriate amount of silver (and copper) coin. The Bank has a free hand.

Curiously enough this system does not apply to the issue of that other form of small change which we call notes. The Bank of England allows the commercial banks to draw out or bring in notes, just as it allows them to draw out or bring in silver, as they please, the transaction always being one of exchanging Bankers' Deposits for notes or coin, or vice versa. But whereas when it pays out coin the Bank of England knows that there is the inexhaustible fount of the Royal Mint behind it, always ready to replenish an ebbing stock, in the case of notes there is (at least in form) no such

inexhaustible fount. No Royal Mint sells notes to it on demand. Instead there is its own Issue Department which, unlike the Royal Mint, is not allowed to coin money without restriction. By the Currency and Bank Notes Act of 1954, certain restrictions are imposed on the Issue Department. The Issue Department is allowed to issue notes to the value, at the official market price, of the gold it holds; but the Bank in fact holds practically no gold, so that this provision is ineffective. The effective provision is that which allows the Bank to issue notes, 'unbacked' by gold, to the value of £1,575 millions, or whatever sum may be agreed upon by the Treasury on application by the Bank. Treasury permission to raise this Fiduciary Issue has, under present statutory regulations, to be notified to Parliament. At present (mid-1959) the Fiduciary Issue is £2,150 millions. This means that the Bank Return shows in the Issue Department a total liability on Notes of £2,150 millions; of these, a small but varying part (£27m. on 1 July 1959) reappear as an asset in the Banking Department, while all the rest are 'in circulation'.

It is often said that the central bank should have a monopoly of the note-issue in the country which is its sphere of operations. The argument is based on the realization that the central bank must control the banking system by being the ultimate source of cash. If the other banks are free to provide themselves with cash by printing notes of their own, the central bank can be thwarted. This argument is perfectly sound provided that the notes of an individual bank are absolutely equivalent to other kinds of 'cash'. The less freely other cash can be replaced by commercial bank notes the less does it matter if the central bank has no monopoly.

The cash that originates in the central bank consists of its own notes and its deposit liabilities to the commercial banks (Bankers' Deposits in the Bank of England). If any commercial bank had the power to issue notes and its notes were absolutely interchangeable with the other kinds of

cash, it would be free from all central-bank restraint on the expansion of its assets (and therefore its share of the total supply of bank money). Absolute interchangeability would imply readiness of the public, all over the country, to accept its notes as willingly as central-bank notes were accepted, and a willingness of other commercial banks to accept the notes of this commercial bank instead of its balances at the central bank in settlement of inter-bank indebtedness arising in the Clearing House. These are very serious qualifications. If they are not fulfilled the commercial bank that is expanding on the basis of its own note-issue will find its reserves of other cash (central-bank notes and deposits) being drained away by people and by banks who, having received payments in the commercial-bank notes, hasten to exchange them for the more widely acceptable forms of cash. A purely local bank, such as were most of the country banks of mid-nineteenth-century England, could clearly not regard its note-issue as freeing it from central-bank control. If it expanded too rapidly it would lose an essential part of its cash reserve.¹ It is not so easy to see what is to deter excessive issues by a number of commercial banks, all over the country, which keep in step with each other in their expansion, in the same way as, compelled by ebbs and flows of cash, they keep in step in any other expansion of deposits. What would then happen would be a decrease in the ratio of cash at the central bank (Bankers' Deposits) to deposit liabilities to the public all round. These reserves at the central bank are generally used for the settlement of Clearing House balances; but if the banks were equally willing to accept from each other

¹ It may, however, be argued that some time may elapse between the damaging local expansion of credit and the cash drain which puts a stop to it. The question was keenly debated by many writers on English banking in the first half of the nineteenth century. A review of the controversy will be found in Viner, *Studies in the Theory of International Trade*, pp. 154-65, and in Wood, *English Theories of Central Banking Control, 1819-58*; see also the examination of this question in Pressnell, *Country Banking in the Industrial Revolution*.

payment in each other's notes (i.e. if commercial-bank notes were regarded by the commercial banks as precisely equivalent to deposits at the central bank) they could afford to allow their reserves at the central bank to decline relatively to their deposit liabilities. Difficulties for the central bank arising therefrom can be averted if law (or custom having almost the force of law) imposes a quite artificial distinction between deposits at the central bank and commercial-bank notes. This can be done by law or custom compelling the commercial banks to hold at the central bank balances equal to a certain percentage of their deposits plus notes. This is quite a common provision in modern banking codes, and where it exists the general argument against allowing commercial banks to issue notes breaks down.¹

If there is any feeling that unrestricted note-issues of commercial banks undermine the authority of the central bank, the law can restrict the commercial banks' issues in such a way as to restrict to the central-bank issue all power of significant variation.² The commercial banks can be granted the right to issue up to certain maximum amounts—maxima which it is expected will always, under any conceivable conditions, be approached. Then the commercial banks, though enjoying the income derived from these issues, are unable to indulge in a policy contrary to the will of the central bank, for the latter, controlling the variable part of the issue, can make the *total* note-issue and total cash what it chooses. This compromise is attractive when the legislature is unwilling to transfer from the commercial banks to the central bank all the income derived from note-issues³ but does not want to leave the central bank's

¹ There remains some case against it in countries where banking is relatively undeveloped and where accordingly bank deposits are not the dominant part of the supply of money.

² Seasonal variations may quite harmlessly be allowed in commercial-bank issues.

³ Notes are a possible source of income to the issuer, for he can issue them (like deposits) in exchange for earning assets.

powers subject to any handicap. The compromise was devised by Peel for the transitional period, following the Act of 1844, during which the English country issues were gradually terminated, and more recently it was used in Canada. The compromise system remains the system regulating the note-issue in Scotland.

IV. *The Bank of England as Lender of Last Resort*

If the central bank is to control the monetary situation effectively, it must not only have power to issue cash in the form of notes when the public prefers this form, it must also have the unquestioned duty to create more cash when the public and the banks demand more liquidity and this demand threatens undesired disturbance of business activity. In more recognizable terms—the Bank of England must lend without stint in time of financial crisis. This duty to act as lender of last resort is highly relevant to central-banking control in that it lies at the root of the willingness of the commercial banks to work to a stable cash ratio. If the commercial banks had to provide for the extremities of panic demands for cash, they would feel it necessary to raise their cash ratios as soon as a cloud, however small, appeared on the financial horizon and, as danger became more threatening, they would attempt to raise their cash ratios further. Correspondingly, the growing confidence of quiet times would encourage them to reduce their cash ratios with benefit to their profits. If, on the other hand, they are always confident that the central bank will come to the rescue of all well-conducted institutions in time of stress, they will feel under no compulsion to raise their cash ratios when danger threatens. They will allow their cash ratios to settle down at the lowest level consistent with convenience and respectability. This level, once reached, leaves no room for squeezing under the impulses of optimism, and the upshot is therefore a stable cash ratio adequate for the convenient transaction of business in the

Clearing House and across the counter, and recognized as sufficient for public faith.

The position just described is the extreme one now reached in the English banking system, though elsewhere the cash ratio generally retains a greater or smaller degree of variability, to the embarrassment of the central bank.¹ The perfection attained in the English system is due primarily to the many decades through which the Bank of England has unreservedly accepted its obligation to lend freely in time of crisis, but it has also been helped by the unique structure of the discount market as a buffer between the central bank and the commercial banks.

Without going into the long and fascinating story of the Bank of England's evolution, we may say that the Bank came to accept its position of lender of last resort because, as a privileged corporation conducting the government's financial business, it could not stand idly by and see London's financial structure collapse in times of stress, and through bitter experience the Bank's governors learned that unstinted lending was the only remedy for such stress. The whole structure of credit depended upon the fact that everybody entitled to cash did not demand cash at once, and the growing intricacies of London's financial structure served not to qualify this truth but only to underline it. Only by hesitant steps did the Bank recognize the implication that it must underpin the structure by acting as lender of last resort, and there were many backslidings. But a trio of severe crises in the middle of the nineteenth century saw the close of the Bank's novitiate, and after the last of them the case was put with final cogency by Walter Bagehot in his classical pamphlet, *Lombard Street*. Since Bagehot wrote, no one has ever seriously questioned the doctrine

¹ The embarrassment here mentioned is that referred to in the middle of the previous paragraph. Paradoxically, the extremity of the English system has led to embarrassment of a different kind. If the central bank can be relied upon to act *automatically* as lender of last resort, the limitation of cash reserves loses its effectiveness. For further discussion see section II of Chapter 9.

that in time of stress the Bank must lend, and lend without stint.

With the passage of time, this doctrine has become second nature to English bankers and its influence on their conduct, if not altogether conscious, has worked itself out to the full. But the process of refinement of central-banking tradition has been greatly helped by the position of the discount houses as intermediaries between the central bank and the commercial banks. The Bank must lend; but to whom? As the public draws cash from the ordinary banks, it is the cash reserves of the latter that call for reinforcement in times of crisis. The obvious borrowers at the central bank would therefore appear to be the commercial banks; and the laws of other countries usually provide explicitly for direct help to them. But traditionally bankers do not like borrowing from other bankers—it is thought a sign of weakness, and the grander titles given to the bankers at the central bank at first did little to modify this reluctance of commercial banks to come cap in hand to the central bank. This tradition accordingly in many countries, including the U.S.A., retarded the action of the lender of last resort and so hindered the development of satisfactory control by the central bank. London, on the other hand, has been free from this particular impediment (though its cousins have sometimes stalked round the corner). Between the Bank and the banks there has stood a small group of discount houses, holding readily negotiable assets on the basis of readily callable loans from the banks. The Bank of England could be called upon to lend to the discount houses, so enabling them to pay off the 'money at call' they ordinarily borrowed from the commercial banks. The additional cash needed by the banking system comes into existence as the Bank of England lends, and it is channelled into the reserves of the commercial banks by route of the discount houses. The commercial banks would not, in the old days, have liked to borrow at the Bank of England, but they were perfectly willing to call in money positively

owed to them by the discount houses, and they could call with success because they knew that the discount houses could always get money from the Bank of England. Reliance on the lender of last resort came more easily for being indirect; and it was London's unique institutional structure that allowed it to be indirect.

Because it is through the discount market that the Bank acts as lender of last resort to the banking system as a whole, the Bank's transactions with the discount houses are not treated as the ordinary business of its ordinary banking customers. They are governed instead by certain general rules applicable only to them and of cardinal importance to the Bank's function as a central bank. The bills brought to the Bank for rediscount or as collateral security must *either* bear two reputable British names, of which one must be the acceptor's, *or* they must be Treasury Bills. Their currency to maturity is generally limited to three months, and in ordinary circumstances the Bank takes only bills that are within a few weeks of maturity. Alternatively, the Bank of England lends to discount houses on the security of those short bonds approved as proper for holding in the discount market.¹ As to the *rate of discount* or interest charged, there are two practices—the traditional Bank Rate practice and the simpler, less spectacular practice that has been common for some years now. The traditional system is for the discount houses to rediscount at the published Bank Rate (a rate still fixed every Thursday by the weekly Court of Directors) or to obtain advances (running for not less than seven days) also nowadays at Bank Rate. This Bank Rate was, and is, normally above (sometimes far above) the discount rates ruling in the open market, so that whether the discount houses rediscount bills at the Bank or obtain advances, the rate they have to pay (under this practice) is a 'penal rate' in the sense that it involves them in losses. The discount houses, being able to obtain money only at rates above those

¹ As to which bonds are so approved, see pp. 58-59 above.

previously ruling in the market, push up the rates at which they would do new business. City commentators say that the market is 'in the Bank' (i.e. the discount houses are obtaining temporary help from the Bank) and that therefore market rates are rising. When 'the market' pays off its debts to the Bank, market rates tend once more to slip away below the official Bank Rate.

The alternative procedure may be described as that of the 'open back door'. While the principle of doing business at the front door at the penal Bank Rate is maintained, the Bank allows the discount houses, or (what is a decided novelty of the nineteen-forties) the commercial banks directly,¹ temporary accommodation at the back door (i.e. through the Bank of England's own broker in the market) at a rate that does not disturb the level of market rates. The Bank's operator is always in touch with the market and sometimes intimates to the discount houses that they can tide over temporary stringency by bringing Treasury Bills to him. He will take the bills at the rate considered by the Bank to represent 'the market level'. When taking in bills (i.e. putting out cash) the Bank of England has special regard for dates in the early future when the Government will be releasing large sums of cash to the market, and the Bank tells the discount houses that it requires bills falling due for repayment on such a date. For example, on certain days in January 1950, when the Bank had to give aid to the market, it called for bills maturing on 15 February, because on that date a large block of Exchequer Bonds fell due for repayment, and the more the authorities could (by taking in the Treasury Bills) reduce the other cash releases they would have to make on that date, the less would be the market disturbance when 15 February came round. In choosing its dates, the Bank likes to have very near dates

¹ The newspaper reports of the daily conditions in the market describe direct transactions between the Bank of England and the commercial banks as 'indirect help'. This is because the reporter is looking at the business from the point of view of the discount houses (whilst I look at it from the point of view of the cash reserves of the commercial banks).

(mostly within a month) so that the market tightness will soon recur, and the market will thus be kept 'on its toes' without further special action by the Bank of England. Now it so happens that Treasury Bills tend to be held early in their lives by the discount houses and then to be sold, as they approach maturity, to the commercial banks.¹ A large proportion of the bills near maturity is therefore generally in the hands of the commercial banks, and the dates demanded by the Bank of England when it aids the market may therefore appear only (in sufficient amount) on bills that are owned by the commercial banks. The Bank of England, hearing that the market is £2 millions short, may say, 'We will take £2 millions of Treasury Bills, maturing on 15 February' and hear that the discount houses have scarcely any such bills, having sold all of that date to the commercial banks two or three weeks earlier. In this circumstance the Bank of England buys the Treasury Bills directly from the commercial banks. The latter thereby have their cash reserves directly strengthened by £2 millions, and allow the discount houses that much more money overnight,² so allowing the latter to balance their books (i.e. pay off all loans called in). The discount houses, of course, carry no cash over, so the net effect of the operation is that the Bank of England has added £2 millions to the Bankers' Deposits in its own books—i.e. to the 'cash reserves' of the commercial banks. Owing to the Bank of England's preference for nearly mature Treasury Bills (of a convenient date) when it aids the market, the occasions when the suitable bills are in the hands of the commercial banks are very frequent, and this direct channel between

¹ This custom (the strict version of which is that the London clearing banks will not hold Treasury Bills in the first week of their lives) originated in the 1930's, when the banks came to a working agreement with the discount houses designed to protect the latter from being squeezed out of existence.

² In effect the banks, on selling bills directly to the Bank of England, cancel their 'calls' on the discount houses—the calls that occasioned the scarcity of funds now relieved by the Bank of England's purchase of bills.

the Bank of England and the cash reserves of the other banks is now very commonly used.

The Bank's operator is similarly ready to sell bills (to absorb a superabundance of cash in the market) at the ruling market rate, thus preventing temporary gluts of cash from unduly depressing market rates. The Bank, however, by choosing carefully the dates of the bills it takes in at other times, minimizes the occasions when it has to sell bills in this way. By these operations on either side of the market, the Bank can of course completely stabilize market rates if it chooses to do so. This was the position for some years before 1951, when it was as though the Bank kept at its back door an automatic machine with reversible action, from which Treasury Bills could be obtained for cash or cash for Treasury Bills at that fixed rate which the Bank wished to see prevailing in the market.

In order to illustrate the operation of the open-back-door machine, we shall consider what happens when an excess of government receipts over government disbursements causes a net transfer from the Bankers' Deposits (i.e. from the cash basis) to Public Deposits at the Bank of England. For this purpose we can ignore all other payments to and fro, which will actually be proceeding at the same time, and watch solely the effects of a net payment by members of the public to the Government. The individuals draw cheques, for say £25 millions, on their accounts with the commercial banks, the cheques being in favour of the Government. The Exchequer officials 'pay the cheques into the account' at the Bank of England. Public Deposits rise by £25 millions. The Bank of England now holds among its assets these cheques, claims against the commercial banks. It presents the cheques to them, taking at the same time £25 millions off their balances with it—Bankers' Deposits have decreased by £25 millions. The cash reserves of the commercial banks have fallen by £25 millions and their liabilities also fall by that amount, for they deduct the amounts of the various cheques from the

balances (deposits) of the customers who have drawn them. At the outset suppose the position to have been:

POSITION I

(£ millions)

Bank of England Banking Department

Public Deposits	10	Government and Other	
Bankers' Deposits	240	Securities	255
Other Liabilities	55	Notes	50
	<u>305</u>		<u>305</u>

Commercial Banks

Deposits	6,000	Cash in hand and at Bank of England	480
	<u>6,000</u>	Earning Assets	5,520
			<u>6,000</u>

Then, after government receipts have exceeded government disbursements by £25 millions, we have:

POSITION II

(£ millions)

Bank of England Banking Department

Public Deposits	35	Government and Other	
Bankers' Deposits	215	Securities	255
Other Liabilities	55	Notes	50
	<u>305</u>		<u>305</u>

Commercial Banks

Deposits	5,975	Cash in hand and at Bank of England	455
	<u>5,975</u>	Earning Assets	5,520
			<u>5,975</u>

Notice that up to this point there has been no change at all in the assets of the Bank of England. The Bank has taken no positive action: a mere redistribution of its liabilities has occurred. As a result of this change, the commercial banks find that their cash ratio is slightly below the standard 8 per cent. and, in the absence of help from the Bank of England, they would proceed to contract their assets and a general process of monetary contraction would

be set in train. As their cash is now £23 millions¹ below the level required for an 8 per cent. cash ratio, they call in the first instance for repayment by the discount houses of £23 millions of their 'Money at Call'. The discount houses, to obtain the cash wherewith to pay off the calls from the banks, sell Treasury Bills to the Bank of England. Selling the bills 'at the back door', the market gets its relief without disturbance of the prevailing level of rates. If it had been forced to 'the front door', obtaining relief there at the official Bank Rate, the dearthness of accommodation would have given market rates a twist upwards.

The effect on balance-sheets is the same whether the back door or the front door is used. As the commercial banks call £23 millions from the discount houses, the latter sell Treasury Bills to the Bank of England, and we can imagine a momentary Position III in the Banking Department of the Bank of England, as follows:

(£ millions)			
Public Deposits . . .	35	Government and Other	
Bankers' Deposits . . .	215	Securities	278
Other Liabilities (including		Notes	50
Accounts of Discount			
Houses)	78		
	<u>328</u>		<u>328</u>

The Bank of England has taken £23 millions of Treasury Bills (so increasing its Government and Other Securities from £255 to £278 millions) and has credited the discount houses with £23 millions in its books (so increasing its Other Liabilities from £55 to £78 millions). The discount houses then meet the calls of the commercial banks, by drawing on their accounts at the Bank of England cheques in favour of the commercial banks. The latter 'pay in' the cheques to the Bank of England (through the Clearing House) and the Bank credits the sums to Bankers' Deposits, debiting the Other Liabilities. We then have Position IV below.

¹ 23, not 25, because the drop of £25m. in their deposit liabilities reduces their cash requirement by 8 per cent. of £25m. (= £2m.).

The banks may then choose to restore their former proportion of Till Money to Cash at the Bank of England, and they can do this by paying in £1 million in Notes to the Bank of England. This refinement would leave their own balance-sheets unchanged, but would cause at the Bank of England a rise of £1 million in Bankers' Deposits and correspondingly in Notes held in the Banking Department.

POSITION IV

(£ millions)

Bank of England Banking Department

Public Deposits	.	.	35	Government and Other	.	.	.	.	.
Bankers' Deposits	.	.	239	Securities	.	.	.	.	278
Other Liabilities	.	.	55	Notes	.	.	.	.	51
			<u>329</u>						<u>329</u>

Commercial Banks

Deposits	.	.	.	5,975	Cash in hand and at the				
					Bank of England	.	.	.	478
					Earning Assets	.	.	.	5,497
				<u>5,975</u>					<u>5,975</u>

The action of the Bank of England in taking up Treasury Bills thus allows the commercial banks to maintain their conventional 8 per cent. cash ratio, and to distribute this cash between its two forms as they desire. And whether the Bank operates in the traditional way at Bank Rate or by the modern mechanism of the open back door, its action is entirely adequate to provide the banks with the cash necessary to support their deposit liabilities. Similarly, if the public draws out exceptionally large amounts in notes from the ordinary banks, the latter can rebuild their cash ratios to 8 per cent. by forcing the Bank of England, in its capacity as the ultimate source of cash, to take up more Treasury Bills. For any contingency this function of the Bank of England provides assurance of adequate cash for the conduct of business. The only difference (and it is an important one) between the two methods of relief (front door and back door) is that the operation of the

Bank as lender of last resort causes a movement in short-interest rates, whereas the alternative method guarantees cash at the undisturbed market rate. But the Bank of England is either way the source of the cash and, by altering the rate of interest at which it operates, it can force a change in market rates if it so chooses.

v. *The Bank of England's Other Open-market Operations*

The development of the Bank of England as lender of last resort has now proceeded to its logical conclusion and the commercial banks operate on a cash ratio fixed just as closely as is practicable at 8 per cent. In effect, the Bank of England guarantees that, through the discount market *and at its own price*, it will allow the commercial banks to draw that amount of cash which equals 8 per cent. of their deposit liabilities. On the face of it, the commercial banks are free to fix their deposit totals as they like, knowing that the Bank of England will create the proportionate cash basis; by its operation as lender of last resort the Bank of England appears to have abdicated from its throne as controller of the supply of money. We have already seen, however, that this statement is subject to the important qualification that the Bank of England, in so operating, is able to dictate the market rate of discount (the rate of interest on short-dated loans). But this is not the end of the story. We have not yet exhausted the possibilities of action by the Bank of England.

If the schematic example given in the previous section is re-examined, the reader will perceive that, quite apart from any change the Bank has forced in the market rate of discount on Treasury Bills, the *status quo* is not entirely restored. In our example, the residual net changes that may become significant are two: first, the total of ordinary bank deposits (the public supply of money) is down by £25 millions, and secondly, the Money Market Assets of the commercial banks are down by £23 millions, a sum disproportionately large in relation to the decline in their

deposit liabilities (since the 'Earning Assets' shown at each Position include a constant amount of Investments, Advances, &c.). The first change reduces the liquidity position of the public and the second change reduces the liquidity position of the banks. If changes of this kind are large and prolonged they will prompt both public and banks to attempt to restore their liquidity positions by selling government securities or by raising money by the issue of new securities in the capital market. This pressure of sales in the capital market will have the effect of forcing rates of interest generally upward. As we shall see in Chapter 7; this general rise of interest rates is likely to set deflationary forces in motion, reducing prices and employment. If this deflationary effect is not desired by the Bank of England, it must take positive action to offset the original decline in ordinary bank deposits. The open back door is not enough for this purpose.

The Bank's offsetting action must be the purchase of medium-term and long-term securities from the investing public, and theoretically these purchases must, in the case we have considered, total £25 millions. If we start from Position IV in the previous section, the Bank must also, to restore the *status quo*, sell £23 millions of Treasury Bills to the market (banks plus discount houses), and this latter step will in fact be taken automatically through the back door, as an incidental result of the Bank's payments for the securities that it is purchasing from the public. Though these two processes will, in fact, proceed simultaneously, the reader will perhaps follow them more easily by separation into successive steps in the following analysis. We suppose that, starting from Position IV, the Bank of England purchases from the investing public £25 millions of government securities other than Treasury Bills.¹ The Bank of England pays for these securities by drafts which

¹ This step is itself a simplification, in that the impact of the Bank's purchases may fall upon the discount houses who (as explained in Section IV of Chapter 3 above) sometimes act as a 'cushion' in the market

the sellers of securities pay into their own bank accounts. The commercial banks present all the drafts (through the Clearing House) to the Bank of England and are credited therefore with £25 millions added to Bankers' Deposits. So we arrive at

POSITION V

(£ millions)

Bank of England Banking Department¹

Public Deposits	35	Government and other	
Bankers' Deposits $238 + 25 =$	263	Securities $278 + 25 =$	303
Other Liabilities	55	Notes	50
	<u>353</u>		<u>353</u>

Commercial Banks

Deposits $5,975 + 25 =$	6,000	Cash in hand and at the Bank of England	
		$478 + 25 =$	503
		Earning Assets	5,497
	<u>6,000</u>		<u>6,000</u>

for medium- and long-term government securities. They will, when they part with these securities, wish to enlarge their holdings of Treasury Bills, and through the open back door these Treasury Bills will have to be supplied by the Bank of England (to prevent competition for scarce Treasury Bills from forcing the rate below the desired level). The impact effect on bank deposits and the cash base will therefore be completely neutralized, just as it would if the Bank of England bought more Treasury Bills. But the Bank's purchases of these other government securities will (unlike its purchases of Treasury Bills) bid up the prices of them (i.e. the discount houses, in their capacity as cushion for the gilt-edged market, part with the securities but only at rising prices). These higher prices will gradually tempt sellers from among the outside public, who will part with securities to the discount houses which, as they replenish their bond portfolios, push Treasury Bills back on to the Bank of England again. In the example analysed in the text this process is supposed to be short-circuited by the appearance of members of the outside public as sellers of securities in the first place.

¹ It is assumed here that the Bank of England accounts for operations of this kind in its 'Banking Department'. This is a simplification, for in fact the Bank holds its medium- and long-term securities only 'in the Issue Department'. A purchase of such securities 'by the Issue Department' can only be paid for, however, by transfer of Treasury Bills from the Issue Department to the Banking Department which can pay the outside sellers of securities through the mechanism described in the text.

At this point the commercial banks recognize that they have excessive cash in relation to their £6,000 millions of deposit liabilities, and they seek to reduce their cash to £480 millions (8 per cent. of £6,000 millions) by buying more Treasury Bills from the discount houses. The latter are experiencing no shortage of funds, and have no more Treasury Bills than before available. The Bank of England, therefore, in order to mop up the surplus of cash in the discount market, has through its market operator to sell £23 millions of Treasury Bills. The automatic machine works in reverse. Thus we reach Position VI (below).

If Position VI is compared with Position I (p. 103) it will be noticed that the only change is in the Bank of England, where an addition of £25 millions to government securities balances (and so neutralizes the effects of) the addition of £25 millions to the Government's balances. It is by the purchase of securities other than Treasury Bills that the Bank of England has been able to undo the contractionist influence of the accumulation of money in the hands of the Government.

POSITION VI

(£ millions)

Bank of England Banking Department

Public Deposits	35	Government and other	
Bankers' Deposits 263—23* =	240	Securities 303—23† =	80
Other Liabilities	55	Notes	50
	<u>330</u>		<u>330</u>

Commercial Banks

Deposits	6,000	Cash in hand and at the	
		Bank of England	
		503—23* =	480
		Earning Assets	
		5,497 + 23† =	5,520
	<u>6,000</u>		<u>6,000</u>

* Charge against Bankers' Deposits resulting from payment by discount houses to the Bank of England for Treasury Bills taken from Bank's operator.

† Treasury Bills sold to market.

‡ Addition to Treasury Bills, bought (via discount houses) from Bank of England.

During the post-war period the open-market operations we have just been describing have been greatly developed, with a consequent shift in the emphasis within central banking. This has happened largely because the Bank of England, incidentally to its responsibilities as the Government's bankers, has had to cope with problems on an altogether new scale in the management of the National Debt. Two major wars in three decades have been responsible for the issue of vast totals of government securities, some of which have to be paid off almost every year. To enable it to meet these debt maturities and to provide part of the capital requirements of industries that have been brought into the public sector, the Government has to issue new bonds, on a huge scale, every year. As the Government's bank, the Bank of England has to pay off the maturing bonds, arrange the issue of new ones, and receive payment for them. These payments and receipts have to be made ultimately by transfers between Public Deposits and Bankers' Deposits at the Bank of England, in the way we have seen, and the Bank of England has to try, by its own operations in Treasury Bills and other government securities, to smooth out the impact of these vast transactions. Both because it has a duty to get the best terms it can for the Government as borrower, and because it has a duty to protect the country's banking system from erratic disturbance by the Government's financial operations, the Bank of England has been driven into more elaborate and more continuous open-market operations.

One of the new developments that have come to dominate the scene relates to the issue and redemption of government securities. The old forms of issue of blocks of securities, amounting to some hundreds of millions of pounds, at a single date continues; and so does the redemption of securities on a single 'maturity date' at which the Government has contracted to repay the capital sums. But both processes, of issue and of redemption, have become in fact continuous. When a new issue of bonds is

announced, only a small proportion is sold at once to ordinary investing institutions and members of the general public. All the rest goes to the Bank of England (Issue Department) which peddles the amount out gradually through the Stock Exchange, through the ensuing months and years. Similarly, when a security is approaching maturity the Bank buys the bonds gradually, through the Stock Exchange, until usually only a small proportion remains to be paid off on the formal maturity date. The government securities, both newly 'issued' and those old bonds which are nearing maturity, are held by the Bank of England, under the Bank Return heading 'Government Securities' in the Issue Department (see p. 79 above). The sales and purchases of these government securities, through the Stock Exchange, have impact on the liquidity of the banks in the way described in the previous section: a sale by the Bank of England reduces banking liquidity and a purchase increases banking liquidity.

These official operations in the gilt-edged section of the Stock Exchange are thus in many ways parallel with the official operations in the discount market. In the discount market the operations are exchanges of Treasury Bills for cash, and cash for Treasury Bills, and it is by means of these operations that the Bank of England regulates the cash basis and exerts influence (in this case a dominating influence) on the Treasury Bill rate, which is the rate of exchange between cash and Treasury Bills. In the other case—the official operations of the Bank of England 'Issue Department' on the Stock Exchange—the Bank of England is regulating the supply of longer-term government debt, by exchanging it in effect for the liquid assets of the banking system. Similarly, the latter operations exert some influence on the rates of interest available on the longer-term securities (these being the rates of exchange between longer-term securities and liquid assets); but in this case the influence cannot usually be dominating, since the forces that determine long-term rates of interest are more

heavily weighted by market expectations. Nevertheless, the influence of official operations is important, as was seen particularly in 1958. The development of this side of the Bank of England's work, in parallel with its more familiar operations in Treasury Bills, has so altered the emphasis of central banking that the Radcliffe Committee (particularly in Chapters 5 and 7 of its Report) took the view that the management of the National Debt is the principal domestic function of the central bank. By its operations in government debt, both short and long, the central bank exerts a powerful influence on the liquidity of the country's financial institutions and on the entire structure of interest rates, and it is chiefly through this influence that the central bank can hope to affect the course of economic activity.

6

EXTERNAL TRANSACTIONS AND THE BANKING SYSTEM

1. *External Payments and Receipts*

DURING the last four chapters we have largely ignored the outside world and have tacitly assumed that banking transactions are confined to one country. We have assumed that bank deposits are transferred from one person to another, in final settlement of debts, and that the recipients are content to hold the transferred deposits, unless for convenience in making small payments they choose to have 'cash', into which the deposits are readily exchangeable. All this is valid enough if the recipients like the payers are people living and transacting their business all within the confines of one country. In fact many transactions fall beyond these limits. Goods are 'imported' and 'exported'. Travellers move from one country to another, both on business and on holiday, and they find it necessary to make payments in moneys that are 'foreign' to their own—payments that cannot be made by the simple process of drawing on one's bank balance. Shipping overseas brings receipts to the great maritime nations, and occasions payment by others—receipts and payments not in a single currency equally acceptable to debtor and creditor. Other services rendered by the nationals of one country to those of another also occasion external payments—as those made in the shape of film royalties on American films shown to British audiences. Emigrants often want to transfer their personal savings—amounts in one currency—to the currency of the country to which they are going; then in later years they sometimes send financial help back to elderly or youthful relatives left

in the home country. International capital movements form another very large group of these 'external transactions'—an American firm constructing a pipe-line in the Middle East, for example, has to incur a large expenditure in the Middle Eastern country; and an intergovernmental loan, unless required expressly for buying goods in the lending country, also involves ultimate payment to the borrower of money different from that which circulates in the lender's country. Interest charges on and repayment of former foreign loans, and dividends to foreign shareholders in a company, all involve payments to people who will not readily accept either the bank deposits or the cash that circulates in the payer's own country.

The purpose of this chapter is to consider how these 'external transactions' are accommodated by the banking system and how the banking position in a country is affected by them. The very important questions relating to the volume and composition of these transactions, and to their variation from time to time, lie beyond the scope of this book: they may be studied in works devoted to this part of economics, which is called 'the theory of international trade'. Here we simply take it for granted that such transactions are continually arising and that payments have to be made in settlement of them; and we have to consider just how the banking system accommodates these payments. The word 'accommodates' is particularly appropriate, for it is by an extension, a stretching, of the ordinary banking facilities available for internal payments, that a very large proportion of these transactions are conveniently settled. It is possible to imagine two countries with simple metallic monetary systems, between which all trading is settled by payment in a monetary metal (e.g. gold) which could be made up by local mints into the money of the one or the other. Again it is possible to imagine two countries with banking systems entirely independent of each other (i.e. not accepting credits with each other), and here also all external transactions would have to be settled by pay-

ment in some such medium as gold which could, according to the monetary laws of the two countries, be manufactured into local 'cash'. In either of these cases, there being no 'accommodation' by the banking system, a description of the banking system would not need to take special account of external transactions, since these could affect the banking system only via their effects on the cash position.

The extent to which banking systems accommodate external transactions varies from country to country, according to the strength and diffusion of the overseas ties of its banking system. The overseas ties of the English banking system are stronger and more widely spread than those of any other; the complexity of the methods of settling its external transactions is therefore extreme. It is this most complex case of the English system that will be outlined here—not described in its full complexity but in its main elements. The reader who has mastered the general principles of the complex English case will have no difficulty in understanding for himself the simpler states of affairs that exist elsewhere.

When an English debtor has to make a payment to an external¹ creditor, he will be required to pay either in sterling (English money) or in foreign money (e.g. by credit in some foreign bank). If payment is made in sterling, the foreign creditor will ordinarily not want to hold the English money (a balance in an ordinary English bank) since his own liabilities are in the main in terms of his own money. The foreign creditor will therefore, in general, *sell* his sterling to his own bank in his own country—this local bank will give him, in exchange for his claim on a London bank, a balance at his home town branch. The Bank of Western Barataria, instead of Mr. English Debtor, will then have a balance of £x with the Midland Bank in

¹ I use at this point the word 'external' to include both overseas British countries and those ordinarily called 'foreign'. In general it is convenient to use the word 'foreign' in the connotation it has in the term 'foreign trade'—i.e. to include overseas British (Dominion, colonial, &c.) territories; and this practice is followed in the remainder of the chapter.

London; and against this increase in its assets, the Bank of Western Barataria will have a new liability, equivalent to £ x , in the shape of Mr. Foreign Creditor's deposit balance in Jumbly-Crumbly, a provincial city in the west of Barataria. All that has happened in the English banking system will be that in the Midland Bank £ x of deposits are due to the Western Bank of Barataria instead of being due to Mr. English Debtor. The total purchasing power at the disposal of Englishmen is down by £ x ; but the total deposit liabilities of the English banks, their cash position, and the position of the Bank of England are all unchanged. If the Bank of Western Barataria has its own office in London, or prefers to bank with some bank other than the Midland, the Midland will lose £ x in cash and £ x in deposits to that other bank; the Bank of England will owe £ x less (in Bankers' Deposits) to the Midland and £ x more to the other bank.

Further developments depend upon whether Barataria is inside or outside the *Sterling Area*; and if it is outside the Sterling Area, upon the precise arrangements made by the British monetary authorities with the monetary authorities of Barataria. If Barataria is inside the Sterling Area, the British authorities will not have bothered to inquire into the transaction; but if it is outside, the whole transaction will have been subject to the Foreign Exchange Control whose permission will have been required for the original transaction and who will be very particular as to the precise manner in which payment is made. The difference between the two classes of transactions—those within the Sterling Area and those going outside it—is so great that many people will think only of the latter as 'foreign exchange transactions'. There is, indeed, some sense in this way of looking at it, for the essence of the Sterling Area is that London acts as banker for the whole of it and English money ('sterling') is freely used for payments from one part of the Area to another (though not for all payments throughout the Area). The closeness

of the connexion between the monetary systems of the various parts of the Sterling Area—the banker-and-customer relationship—lies at the root of the Foreign Exchange Control's lack of concern about transactions within the Area; and, if we are to understand the banking situation that makes this possible, we must give the nature of the Sterling Area and its foundation some particular attention.

II. *The Sterling Area*

The Sterling Area is a collection of countries associated not by any formal arrangements nor as the result of any conscious design. Like Topsy is 'just grown'. It is not confined to the British Commonwealth and it has varied in extent. Just now it happens to be almost limited to Commonwealth countries (Canada is outside and South Africa wavers on the brink) though in the past it has quite clearly included other countries such as Argentina and Denmark. It comprises all those countries *between* which payments are freely made in sterling and which therefore look to London as their banker. The payments are all those passing between the countries—those made by traders and tourists, by bankers themselves (in settlement, for instance, of capital transactions) and occasionally by governments.

Inside a country the usefulness of bank deposits for making payments from one individual to another and the loan facilities offered by bankers cause the development of the banking habit. As the banking habit develops, people get into the way of holding bank balances. In precisely the same way the usefulness of sterling for making international payments causes countries outside Britain to hold London balances—money in London to be used as a working balance. When I say 'countries . . . hold London balances' I mean not necessarily that Governments hold London balances (this is exceptional) but that banks (especially central banks), whose main business is elsewhere, keep balances in London. Among the banks operating in this manner are many established as English companies

and having their Head Offices in London. These are the 'international banks' and the 'imperial banks' whose formation became rapid from the eighteen-sixties onwards.¹ They have most, if not all, of their branches overseas, and their principal business is centred in their overseas branches and particularly between their overseas branches and London. While their most profitable assets are their loans and advances to overseas customers, they hold their main reserves of cash and other liquid assets in London.

Other commercial banks have their Head Offices as well as most of their branches overseas, but have branches in London. Some of the Australian banks, for example, are organized in this way while others have their Head Offices in London. Although sometimes the London office is only a branch, it is a very important branch, playing a vital part in facilitating the international transactions of its clients, and holding cash and other liquid assets in London. These London assets are vital to the financing of their international transactions.

In the last thirty years it has become usual for the other countries of the Sterling Area (i.e. countries other than England—the area that official circles have come to label 'R.S.A.'—Rest of the Sterling Area) to have their own central banks. These central banks have generally, for purposes of control in their own countries, taken over from the commercial banks the 'variable' part of the London liquid assets. Working balances in London are still held by the overseas commercial banks; but the London 'reserves' are held by the central banks.

These London balances of the other Sterling Area countries are the international reserves of these countries—their reserves against excesses of external spending over external receipts, just as an individual's bank balance is his reserve against a temporary excess of spending over re-

¹ Two useful books about the development of these banks are *The Imperial Banks* (London, 1929) and *The International Banks* (London, 1935), both by A. S. J. Baster.

ceipts. For reasons that will emerge later the 'R.S.A. countries' do not usually hold any other international reserves. The 'London balances' consist of cash (mainly deposits at the Bank of England, and a small amount of notes, &c., as till money), short loans to discount houses, Treasury Bills, and sometimes other bills that can be readily rediscounted in the London market.¹ A country with large London balances (India, Australia, &c., at present) ordinarily has these balances largely concentrated in the ownership of its own central bank, only relatively small 'working balances' being left in the ownership of those commercial banks which have offices or agents in London. Much the greatest part of the central bank's balance is (it is understood) held in the form of Treasury Bills,² the remainder being held in the form of an ordinary deposit balance at the Bank of England. The immediate impact of a payment made in London by another country of the Sterling Area is therefore a transfer of cash (balance at the Bank of England) from a commercial bank or central bank of that country to some other bank's account at the Bank of England, but a substantial and continuing net payment to be made in London will occasion a running-down of the amount of U.K. Treasury Bills held by the central bank of the country concerned.

The essence of the Sterling Area is thus that London is banker to a large number of other countries. Payments between one part of the Area and another are made by transferring claims in London (just as ordinary private

¹ Some countries' banks or other monetary authorities hold, in addition to the liquid sterling assets of the classes mentioned, some highly marketable British Government securities. They do not ordinarily reckon to use these for meeting variations in the balance of payments, but hold them in reserve. Reserves exist, however, to be used, and from London's point of view these securities have to be regarded as part of the liabilities which London may be called upon to meet.

² Each week the Bank of England, on behalf of these other central banks of the Sterling Area, takes up new Treasury Bills to replace those maturing. These purchases of new Treasury Bills are outside those of the Association referred to in Chapter 3.

debts are settled by cheque which transfers a claim against a bank). And, for the sake of convenience in meeting variations of payment and receipts, the countries in the Sterling Area hold their working balances in London, just as you and I hold working balances in ordinary bank deposits. Every other feature of the Sterling Area derives from this fundamental point that London is banker to the whole Area.

The foundations upon which this extraordinary phenomenon rests are worth some attention, if we are to understand readily the functions of London as banker to the whole Sterling Area.¹ London's financial position had its roots in London's position as the leading centre of world trade during the nineteenth century, and in London's position as a great and successful international lender. London became an international financial centre because *sterling was always useful* and *sterling was always obtainable*. An ordinary banking account is something that everybody wants because it is always useful and always obtainable. People use banks because they find that cheques on their banks are acceptable to their creditors and because they can always get bank balances by selling goods or services to other people or even by borrowing from the bank. And so it has been historically with sterling as an international currency. In the nineteenth century sterling was always useful—it could be used for buying goods in England, which was the world's greatest market; it could be used for paying interest on English loans; and it could be used for the employment of English ships to carry goods anywhere in the world. Secondly, sterling was always obtainable: it could be obtained by selling goods in England—the English market had a great appetite for the food and raw materials that other countries were producing for export. Also, sterling could be obtained by borrowing in

¹ The following passage owes much to the stimulating discussion of 'Sterling as an International Currency' by Professor B. Tew in the *Economic Record*, June 1948.

London: a country that wanted more sterling to spend could almost always obtain long-term capital in the London market and, even when long-term loans were temporarily unobtainable, the crisis could be tided over by getting short-term accommodation in London. As the Bank of England came, by fits and starts, to recognize its position as lender of last resort, it became true that money could always be borrowed in London at a price. This price might occasionally be very high, but at some price sterling was always obtainable, and an expensive short-term loan could be replaced by a cheaper long-term loan as soon as London money-market conditions eased.

London could not have gone on lending to other countries year after year and decade after decade if her position as leader in the Industrial Revolution, followed by the development of cheap food production in the outside world, had not given her an inherently strong balance of payments throughout the period of London's rise as an international financial centre. The hold of sterling as an international currency tightened partly because in those days London could afford to lend abroad.

But it was not merely a matter of being able to lend abroad. There were attractive opportunities in the opening-up (especially by railway and harbour construction) of the great new food and raw material lands of the world. And London went on lending because the borrowers on the whole met their obligations—as they could afford to while England provided such a good market for their produce. As, with the aid of English capital, their production of food and raw materials expanded, their sales in the English and other markets expanded and enabled them to pay their debts.

It is important to realize how well England's potentialities as an exporter of capital fitted in with the fundamental trading position of the nineteenth-century world. England could produce the goods and the finance that other countries wanted, and England wanted the food and

other goods that other countries were being developed to produce. This was the peculiar combination of basic facts that gave strength to London as an international financial centre. At the right time her own monetary institutions were being shaped in a helpful way. Adherence to the gold standard was an important secondary point; but the really fundamental conditions were that, due to the trading and lending position, *sterling was always useful and sterling was always available*.

In the light of these historical foundations, we can now go a little farther into the geographical shaping of the Area and the services that the countries in the Area came to expect London as their banker to provide. The extent of the Sterling Area was determined simply by the dictates of convenience. Sterling had become an international currency, used not only for transactions between England and overseas but also for transactions that never touched England (or even English traders) at all. But although everybody was apt to use sterling, no one was under compulsion to do so—there were no international agreements regulating its use. Consequently, some people used it more than others. Those who used it most were, naturally, those who had the closest business relations with England—those most dependent on England as a source of goods, those most dependent on the English market as an outlet for exports, and especially those wanting to borrow in London and those having sterling obligations to meet as the result of former borrowing. Such were the traders, the bankers, and the governments of the British colonies and Dominions, South America, and to a less extent many other countries. The variation in the closeness of economic relations with England was reflected in a variation in the extent to which they used sterling and held their international reserves in sterling. One circumstance making for wide extension of the Sterling Area was the fact that throughout the formative period sterling was interchangeable with gold at a fixed rate (i.e. sterling was on a gold

standard)—making sterling even more useful, and as sterling balances could earn interest while gold was 'barren', the commercial bankers who were (more often than not) responsible for arranging these matters had an inducement to hold sterling rather than gold for reserve purposes.

Gold was useful because in the last resort it could be used for settling debts outside the Sterling Area. However, it was not only gold that could be obtained in London, but also (and much more usefully) the money of any country in the world. London had the greatest foreign exchange market in the world—any currency could always be bought or sold at the keenest price in London. Consequently, anyone in the Sterling Area having to make a payment to someone outside the Area—to an American exporter, for example—could use a London balance for purchasing in London the foreign currency which the American exporter required. The debtor might be an English importer, who would buy U.S. dollars through his own London bank. Or he might be an Australian importer, who would ask his bank in Australia to obtain dollars: the Australian bank would then use some of its London balance to buy U.S. dollars in London. Thus the London Foreign Exchange Market came to cope with the foreign-exchange requirements not only of England but also of all other countries in the Sterling Area.

Correspondingly, a payment received in U.S. dollars (say from an American importer) would be settled in London, no matter where in the Sterling Area the receiver lived. The dollars would be sold in London by the receiver's bank, whether this were an English or an Australian bank, the Bank of Iceland, or any other bank in the Sterling Area. Thus all the foreign-exchange receipts of the Sterling Area came to flow naturally into London, and all foreign-exchange requirements of the Sterling Area would fall on London and be bought by the use of the London balances of the Sterling Area countries. It follows that what matters most directly to those responsible for

London's foreign-exchange reserves is the balance of payments not of England alone but of the Sterling Area as a whole. England may be earning more 'foreign exchange' than she is spending, and yet be losing 'foreign-exchange reserves' because the rest of the Sterling Area has a heavily adverse balance with the outside world. When this is happening, the Sterling Area countries will be drawing heavily on their London balances—the total of English Treasury Bills they own will be falling sharply. Alternatively, English reserves of foreign exchange may be untouched while she has a heavily adverse balance of payments, for the Sterling Area as a whole may be earning as much as it is spending in the outside world. England will then be paying for its adverse balance by adding to its debts to the other Sterling Area countries; the latter will find that their London balances are rising.

The hypothetical case just stated in fact roughly describes what was happening during part of the Second World War. The net needs of the Sterling Area as a whole, for the currencies of outside countries (largely U.S. and Canadian dollars), were being taken care of broadly by the American and Canadian aid programmes and by British sales of securities in the United States, so that the relatively meagre reserves of gold and dollars held by the British authorities were not falling. But the other Sterling Area countries had huge surpluses of earnings and thus accumulated large London balances.¹ These altogether abnormal London balances, which the owning countries wanted to turn into useful goods (often American goods) as rapidly as possible, were a source of strain in the Sterling Area in the early years after the war. Their abnormality originated in the abnormal war-time balances of international payments, but the mode of accumulation was perfectly normal: the 'sterling balances' grew through the normal

¹ This brief indication of the origin of the 'sterling balances problem' must not be taken as the whole story; the interested reader may care to pursue it in Chapter ix of Sayers, *Financial Policy, 1939-1945*.

functioning of the banking mechanism of the Sterling Area.

Another important present feature of the Sterling Area also grew naturally from London's position as the banker through whom all the foreign exchange transactions flow. This is the 'dollar pool'. London (as banker) holds the gold and dollar reserves for the whole Sterling Area. Countries in the Sterling Area pay dollars, earned by them, into the common pool, and draw from the pool to meet their dollar requirements. This is simply the continuance of old practice. The dollar pool is thus not something foisted on the Sterling Area by a cantankerous London, but something that grew naturally in the course of London's services as banker to the Sterling Area. What was new in the nineteen-forties was the dollar scarcity, and because of this it became necessary to control the demand for dollars by erecting an exchange control 'fence' not just round England but round the whole Sterling Area. London, as guardian of the dollar reserves of the whole Area, had to ask the other countries to moderate their demands for dollars.

The fact that all the external transactions of Sterling Area countries (including their transactions with each other inside the Area, as well as those with countries outside it) are performed through London gives importance to the question of rates of exchange between the various currencies (Indian rupees, Australian pounds, &c.) and the London pound ('the pound sterling'). The Sterling Area grew up in a world in which there was considerable stability in these rates of exchange, and it is sometimes suggested that there is a necessary fixity in these exchange rates. This is not the case; but there are strong forces making for such rigidity. The closeness of trading relations implies that import and export prices are, to the denizens of the importing and exporting country, likely to have most stability if there is also stability in the exchange rate between England (the principal market) and that

country. Similarly with capital transactions: a country with interest and repayment obligations fixed in sterling will be making difficulties for itself if it drops the rate at which its own currency exchanges for sterling. Again, as for convenience the reserves are in London funds (sterling claims), the reserves maintain fixed values in local currencies only if the exchange rate on London is fixed. So, though there is no absolute fixity, there is a good deal of stability in exchange rates between the various currencies within the Sterling Area, even at times such as the early nineteenth-twenties and the early nineteen-thirties when there was great instability outside the Area.

As for the exchange rates between the Sterling Area countries and the outside world, this is (given the general stability within the Area) essentially a question of the rates between sterling itself and the outside currencies. If the sterling-dollar rate moves, it takes all or most of the Sterling Area currencies with it, because their convenience lies in stability in terms of sterling rather than stability in terms of dollars or other outside currencies.¹ Variations of this kind—variations of the 'master-rate' linking all sterling currencies with those of the outside world—were considerable in the early nineteen-twenties and again in the early nineteen-thirties, and experience then showed that these variations are compatible with the continued existence of the Sterling Area. But such variation does make sterling rather less usable, and this is especially important to countries that also have big transactions with another currency. The outstanding example of the latter countries is Canada, whose close trading and financial connexions with the U.S.A. led her to wobble away from the Sterling Area in

¹ In September 1949, for example, all moved together except the Pakistan rupee, which retained its lonely eminence largely because the circumstances of her international trading position at the moment made stability of her prices in terms of U.S. dollars peculiarly attractive. But the consequent rupture of her exchange rate with her immediate Sterling Area neighbour (India) posed some awkward problems for Pakistan, and it was not very long before the Pakistan rupee was devalued.

the period of sterling instability in the early nineteen-twenties, and to leave the Area completely in the nineteen-thirties. Variation of sterling rates in important outside currencies is damaging to the 'fringe' countries of the Sterling Area, and therefore tends to narrow its boundaries.

Similarly, lack of convertibility of sterling tends to drive out fringe countries, because it reduces the usefulness of sterling. The clearest case of this is provided by the behaviour of the Argentine in the twenty years after 1930. Through the nineteen-thirties, although the Argentine had growing trade and financial relations with the U.S.A. and although the sterling-dollar rate varied, the Argentine remained more or less within the Sterling Area. But during the nineteen-forties sterling became convertible into dollars only by special arrangements that had to be negotiated between governments, and it became less useful for buying goods from Britain. When the Argentine found that she could use her sterling neither for buying British locomotives nor for buying dollars that could be spent on American locomotives, she decided not to take sterling with her old readiness—that is to say, she left the Sterling Area.

The foreign-exchange troubles of the last fifty years have thus tended to narrow the Sterling Area. Just as its early strength was derived from Britain's strong balance of trade and her position as a lender to countries whom she helped to develop into good payers, so the recent chronic weakness of the balance of trade has undermined the foundations of the Sterling Area. First the variability of the exchange rates between sterling and the outside world and then the restriction of sterling's convertibility have encouraged the 'fringe' countries to break away, so that the Area now consists of less than the Commonwealth. But it remains the largest area in the world free from internal payment restrictions. The outliers of London banking bring to the London money-market the net adjustments of all the external transactions of the countries within the Area; and no account of English banking can be complete

without some reference to the impact on London of these transactions.

III. *Transactions outside the Sterling Area: the Exchange Equalization Account*

Transactions between people in the United Kingdom and people in countries outside the Sterling Area can be settled only through the mechanism of the foreign exchange market. This is obvious enough when English goods are sold for, say, French francs: the English supplier does not want the francs, but sterling, and he will ask his bank to sell the francs. But it is equally true if goods exported from England are invoiced in sterling (as they often are), for in this case the French importer will sell francs in order to get the sterling with which he can settle the account. Similarly, French exports to England give rise to a demand for francs: either the goods are invoiced in francs, and the English importer has to buy francs in order to make the payment, or, if the invoice is in sterling, the French exporter wants francs in exchange for the sterling with which he is paid. All these transactions in 'foreign currencies' are subject to the Foreign Exchange Control, a statutory control exercised by the Bank of England in conjunction with the Treasury. This control restricts the purposes for which foreign currencies may be bought by United Kingdom residents, and restricts disposal of the foreign currencies which come into the possession of residents (e.g. as a result of the export of goods).

The Exchange Control does not itself supply the foreign currencies demanded, or buy the currencies which come into the hands of U.K. residents. To obtain foreign currency, or to dispose of it, the resident has to go to an 'authorized dealer'—a bank authorized by the Control. These authorized dealers are able to cover the great bulk of their customers' requirements by 'marrying' the demands of customers wanting foreign currencies with the supplies of foreign currencies offered by other customers

who are wanting sterling. But there is no automatic balance between these demands and supplies: sometimes the daily transactions show an excess of foreign currencies on offer, while on other days the authorized dealers may find that demands for these currencies exceed the amounts coming in. To absorb these excesses, sometimes on one side and sometimes on the other, the *Exchange Equalization Account* stands behind the authorized dealers. This Account is an official reservoir of gold and foreign currencies, managed by the Bank of England. Gold is held by the Account because it can readily be sold, at fixed prices, to the monetary authorities of other countries, for the currencies (e.g. U.S. dollars) which the Exchange Equalization Account requires at any time. Being willing to absorb excess demand for an excess supply of foreign currencies, the Exchange Equalization Account is able to hold the rates of exchange between sterling and other currencies within the narrow limits imposed by Britain's international obligations as a member of the International Monetary Fund.

All transactions involving the exchange of sterling for other currencies lean upon the willingness of the Exchange Equalization Account to 'clear the market'; this is true not only of transactions to which U.K. residents are parties but also those which originate in other parts of the Sterling Area. If an Australian wool exporter sells francs to his own Australian bank, the francs will be offered for sterling in London by the Australian bank; and a demand for U.S. dollars, e.g. to pay for machinery shipped from America to Australia, is satisfied by the use by an Australian bank of some of Australia's 'sterling balance' to buy U.S. dollars in London. Thus the British Exchange Equalization Account operates as the reserve of gold and foreign currency not merely for the United Kingdom but for the entire Sterling Area. And in every operation what the Account does is to sell foreign currency *for sterling* or *sell sterling* in exchange for foreign currency offered to it. As a matter of practice, it turns most of its foreign currencies into gold, and

practically all its sterling bank balances into Treasury Bills, so that its stock-in-trade consists mainly of gold and Treasury Bills. When the balance of international payments is flowing in favour of the Sterling Area, as a whole, the Account's gold will be running up and its Treasury Bills will be running down; and vice versa. But in addition to actual gold, the Account always holds an important working balance of U.S. dollars which it can always replenish by selling gold to the U.S. authorities. The impact of the Account's transactions on the English financial system is therefore that of an exchange of U.S. dollars for U.K. Treasury Bills.

The object of this continual exchange of Treasury Bills for dollars and dollars for Treasury Bills, in the Exchange Equalization Account, is to hold the foreign exchange value of sterling within narrow limits. But the operations have effects also on the internal financial system, and it is these effects we have next to investigate. We will begin by assuming that English people have an excess of payments to make to countries that claim dollars or gold. Then they through their banks and the latter through the Bank of England buy dollars from the Account. The Account receives English bank deposits in the shape of a transfer from Bankers' Deposits to Public Deposits at the Bank of England. The Account proceeds to use its balance at the Bank of England to buy Treasury Bills in the market, and this gives the English banks the chance to rebuild their cash ratios at the expense of their Money Market Assets. Putting these steps into our usual schematic form we have:

POSITION I

(£ millions)

Bank of England

Bankers' Deposits + Note		Government Securities	
Liabilities to Commercial		(Treasury Bills)	
Banks	80		
Public Deposits . . .	100		
	<u>180</u>		<u>180</u>

TRANSACTIONS OUTSIDE STERLING AREA 131

Commercial Banks

Deposits	1,000	Cash in hand and at the	
		Bank of England . . .	80
		Money Market Assets . .	200
		Other Assets	720
	<u>1,000</u>		<u>1,000</u>

Cash ratio 8 per cent. Money Market Assets ratio 20 per cent.

POSITION II

(After the public has paid 40 for the required dollars, and the Bank of England has charged their cheques to Bankers' Deposits and credited the proceeds to the Exchange Equalization Account under 'Public Deposits'.)

Bank of England

Bankers' Deposits + Note		Government Securities . . .	180
Liabilities to Commercial			
Banks	40		
Public Deposits (incl. 40			
for E.E. Account) . . .	<u>140</u>		
	<u>180</u>		<u>180</u>

Commercial Banks

Deposits	960	Cash in hand and at the	
		Bank of England . . .	40
		Money Market Assets . .	200
		Other Assets	720
	<u>960</u>		<u>960</u>

Cash ratio 4 per cent. (approx.).

Money Market Assets ratio 21 per cent. (approx.).

POSITION III

(After the commercial banks have rebuilt their cash ratio to 8 per cent., by unloading Money Market Assets on to the Bank of England, but before the Exchange Equalization Account has used its balance.)

Bank of England

Bankers' Deposits + Note		Government Securities . . .	217
Liabilities to Commercial		(180 + 37 taken from mar-	
Banks	77	ket through the back door)	
Public Deposits	<u>40</u>		
	<u>217</u>		<u>217</u>

132 EXTERNAL TRANSACTIONS AND BANKING SYSTEM

<i>Commercial Banks</i>			
Deposits	.	.	960
Cash	.	.	77
Money Market Assets	.	.	163
Other Assets	.	.	720
			<u>960</u>

Cash ratio 8 per cent.

Money Market Assets ratio about 17 per cent.

Then the Exchange Equalization Account proceeds to use its balance to buy Treasury Bills in the market. The discount houses and the banks together have no desire to sell Treasury Bills—in fact the banks have rather less Money Market Assets than they would like to have if their cash position were a little easier. Then to prevent the competition for Treasury Bills from forcing the discount rate below the level it thinks right, the Treasury Bills are made available in effect by the Bank of England. The latter reduces its holding of Treasury Bills, charging the unloaded bills against Public Deposits. So we have:

POSITION IV

<i>Bank of England</i>			
Bankers' Deposits, &c.	.	77	Government Securities .
Public Deposits	.	<u>100</u>	177
		<u>177</u>	<u>177</u>

Commercial Banks as in Position III

The transition from Position III to Position IV is likely to be made quite unobtrusively, without any intermediary strain on the discount market, by an increase of 'tap' issues of Treasury Bills to the Exchange Account countered by an equal decrease in tap issues to the Bank of England—or even by direct transfer of bills from the Bank to the Exchange Account.

Position IV is, we should emphasize, the position reached when the Bank of England operates readily 'at the back door' without allowing any disturbance of market rates. Given the Exchange Equalization Account's habit of using the proceeds of foreign currency sales to buy

Treasury Bills, the commercial banks can maintain their cash ratio without forcing any further contraction of the supply of money. But in Position IV there remain two significant differences from Position I: the public's deposits at the commercial banks are down by 40, and the commercial banks' Money Market Assets ratio is down from 20 to 17 per cent. The public and the commercial banks will therefore both be a little less liquid than before, and if these changes are at all pronounced there will be (as in the parallel cases in the previous section of this chapter) a tendency for interest rates to rise. If it wishes to prevent this rise, the Bank of England will have to buy securities, so adding to the cash reserves of the commercial banks and inducing them to expand their earning assets and their deposit liabilities to the public.

As in the case discussed in the previous section, this deflationary effect of an adverse balance can be offset by a simultaneous inflationary factor such as a government deficit. Again, if the excess demand for foreign currency originates not in England's balance of payments but in that of the Rest of the Sterling Area, the banks of the R.S.A. will find the 'cash at the Bank of England' for paying for the foreign currency by selling Treasury Bills, and these Treasury Bills will be taken up by the Exchange Equalization Account. There will in this case be no strain at all on the English banking system and no residual deflationary effect in England (though there will be in the R.S.A.).

In the reverse case—an excess supply of foreign currency in English hands—the English people sell the foreign currency through their banks to the Exchange Equalization Account, which obtains the English cash required in exchange by selling Treasury Bills. Taking as the starting-point Position I as on pp. 130–1 above, and supposing the excess supply of foreign currency to be absorbed by the Exchange Account as 40, we shall have corresponding to Position IV in the opposite case:

POSITION IVA

(£ millions)

Bank of England

Bankers' Deposits, &c.	83	Government Securities	183
Public Deposits	100		
	<u>183</u>		<u>183</u>

Commercial Banks

Deposits	1,040	Cash	83
		Money Market Assets	237
		Other Assets	720
	<u>1,040</u>		<u>1,040</u>

Cash ratio 8 per cent.

Money Market Assets ratio 23 per cent.

In this Position IVA, the banks have got their cash ratio right, but they will feel that their Money Market Assets ratio is rather high. They will be inclined to unload some Treasury Bills on to the Bank of England, using the proceeds for buying more remunerative though longer-term securities. Similarly, the public, with the supply of money up from 1,000 to 1,040, will feel unnecessarily well supplied with money balances and will tend to demand more securities. Thus the pressure of excess liquidity both in the banks and among the public will tend to drive down the rate of interest. No automatic action of the authorities will prevent this inflationary factor from appearing, though simultaneous deflationary factors (a government surplus, or an excess of private saving over private investment) will neutralize it if they happen to be present.

Our analysis has thus led us to the general conclusion that an adverse balance of English payments will set up slightly deflationary forces, and correspondingly a favourable balance will set up slightly inflationary forces. These deflationary or inflationary forces are part of the situation on which the Bank of England has to operate; the authorities will do exceedingly well if they always diagnose the

current situation correctly.¹ It is for the authorities to consider, in the light of other circumstances, whether they want these deflationary or inflationary forces to work unimpeded or whether they ought by deliberate action to neutralize them. Why the authorities should bother their heads about the disturbance of the interest-rate structure, why, indeed, we say they are 'inflationary' or 'deflationary', are questions we must seek to answer in Chapter 7.

¹ It is important to remember that for purposes of practical policy the diagnosis has to be made while a change is proceeding, and cannot wait upon the appearance of a comprehensive statistical record.

THE RATE OF INTEREST, THE SUPPLY OF LOANABLE FUNDS, AND ECONOMIC ACTIVITY

1. *Short-term Rates of Interest and the Holding of Goods*

BANKERS sometimes allege that they are powerless to influence the volume of economic activity, and that they merely sit in their offices and welcome the opportunity to provide temporary financial help for any sound business that comes along. But though the individual banker may feel that his role is essentially a passive one, the banking system as a whole (including the central bank) does through devious channels have an important influence on the tempo of economic activity, and it is the purpose of the present chapter to analyse and evaluate these devious channels.

The tempo of business activity depends upon the readiness and ability of the business men to employ real resources in the processes of production, and it is through its influence upon both the business man's readiness and his ability to set resources to work that the banking system operates on the level of activity. It is important to remember throughout the following paragraphs that the business man is influenced also by many factors not in the least under the bankers' control, and we shall have to consider how the banking factors compare with others in weight. But whether the non-monetary factors are powerful or weak, it is generally agreed that the banking factors (the monetary factors) have *some* share in the determination of the business man's course and therefore in the determination of employment, prices, and income. The banking situation influences the business man in any or all of three

ways: through the short-term rate of interest, which primarily affects the cost of holding goods temporarily; through the long-term rate of interest, which primarily affects the marketability of fixed capital equipment; and through the availability of loanable funds, which directly affects the business man's capacity to purchase any real resources—including finished goods, labour, &c., and goods in course of production.

For reasons to be discussed in Chapter 9, the banker deliberately confines his lending, in the main, to short-term purposes, and this means that, of all business transactions, it is the holding of stocks of finished goods or marketable raw materials that he most likes to finance. The 'liquidity' of the trader's balance-sheet position, if substantial marketable stocks are held, provides attractive security for the banker and makes it unnecessary for him to consider at all closely the longer-term earning capacity of the borrower. The most direct influence of the banker would therefore seem to be exerted through his greater or less willingness to lend at any time, and particularly through variations in the rate of interest he charges on the short-term advances to business men; and some economists, notably Sir Ralph Hawtrey,¹ have regarded this as the main link between the bankers and the tempo of economic activity. The argument runs thus: operators in most lines of business hold stocks, in one shape or another, in order to meet variations in customers' demands and in order to avoid the consequences of interruptions in the supply of materials, &c. The convenience of holding stocks has a certain money value to the dealer, and he balances this value against the cost of holding stocks. Among the costs of holding stocks is the interest that has to be paid (or, if the money is provided by the dealer himself, might have been earned elsewhere) on the money borrowed to enable the dealer to

¹ The principal works in which Sir Ralph Hawtrey develops this theory are *Currency and Credit*, *The Art of Central Banking*, and *A Century of Bank Rate*.

acquire and hold the stocks. Consequently a rise in the rate of interest charged on advances by the banks constitutes an increase in the cost of holding stocks and will provide an incentive to dealers to reduce stocks. This they can do only by buying less rapidly than they are selling. They exchange goods for cash—they are ‘absorbing cash’, which they use to pay off debts. If this happened on any considerable scale producers of the goods held in stock would find sales falling off, and they would tend to cut prices and/or curtail output. The typically deflationary symptoms of falling prices and output would thus appear. Contrariwise, if the banks reduced their interest charges, the cost of holding stocks would fall and dealers would be encouraged to increase their stocks, and this they could do only by buying more rapidly than they were selling. Orders to producers would rise—output expand—employment increase—money incomes rise—and so on. Inflationary conditions would, in short, be promoted by a reduction in bank interest charges.

The importance of this argument depends upon just how much weight is attached by entrepreneurs to changes in the interest charge when they are deciding to add to or subtract from their stocks. There are many other costs of holding stocks—warehousing, insurance, allowance for perishing, and, above all, the risk that the price of the commodity will fall while it is being held. These various charges vary very much from one commodity to another, but in most cases they are sufficient to swamp any but the most extreme changes in interest rates. The supposition that changes in the rate of interest do not have substantial effects on ‘buying for stock’ has been confirmed by the evidence collected by the Radcliffe Committee. There may well have been rather different economic conditions in the past (perhaps in England in the first half of the nineteenth century), and perhaps there are conditions in some trading communities today, in which variations in dealers’ stocks are highly sensitive to the rate of interest;

but in general, in speaking of most modern economies, we can say that the bankers cannot substantially influence economic activity through this particular channel.

It should not be supposed that the level of stocks is therefore insensitive to anything that bankers can do. The *availability* of credit is likely to be highly relevant. If, as is normally the case, rising interest rates are associated with lowered willingness to lend (and therefore greater difficulty in borrowing), the business man often finds a run-down of stocks the easiest way of adjusting his financial position. But it is *tight credit* rather than *dear credit* that produces this reaction.

II. *The Connexion between Short-term and Long-term Interest Rates*

In the main the interest rates directly determined by banking policy are rates for short-term financing. The influence of the bankers' decisions, however, penetrates far beyond the temporary business operations they themselves prefer, because there are substantial connexions between short-term rates and long-term rates of interest. Any pronounced change in short-term rates is always associated with some change in long-term rates; and banking policy is thereby enabled to influence those business decisions which turn on the level of long-term interest rates, as well as on those rather rarer cases in which short rates are of direct importance. If we are to understand how banking policy affects economic activity, we must not be content with observing that changes in long-term rates are generally associated with changes in short-term rates: we must attempt to explain *why* a pronounced movement in short-term rates is bound to be followed by a movement, in the same direction, in long-term rates.

In the first place it is important to remember that a rate of interest is a *price*—the price of money now in exchange for money at some later date. Every price has its own market. To find the connexion between two prices we

must look for some connexion between the short-term capital market—the market dominated by the relations between banks and their customers—and the long-term market. (It is convenient for the moment to assume that the capital market is just divided in this simple way: the complications will be referred to presently.) What, then, are the points of contact between the short-term capital market and the long-term capital market?

The answer to this question falls into two parts, for some of the points of contact are among the banks' customers (who have the possibility of redistributing both their borrowing operations and their assets) while other points of contact are in the banks themselves, since the banks operate not only in the short-term market but also in the long-term market (in that they operate in long-term government securities). We shall therefore suppose that the authorities have decided upon a sharp rise in short-term interest rates, and we shall consider what reactions, first of bank customers and then of the banks themselves, will force a rise in long-term interest rates.

We are supposing that the banks, following official policy (which would be indicated by a rise in the official Bank Rate), raise their interest charges on all loans and overdrafts, and that they raise also the interest allowed on 'Time Deposits. Individuals and firms have their liquid assets (apart from working balances of money) distributed between 'Time Deposits¹ and long-term securities, and their liabilities include long-term claims against themselves (debentures, mortgages, &c.) and short-term claims against themselves, in the shape of advances from the banks. Any one firm or individual is unlikely to have assets and liabilities of all these classes at once: a firm owing much to the bank on overdraft is unlikely, for instance, to hold at the

¹ Recently (1956) it has become not uncommon for very large firms in England to hold Treasury Bills. The yield on these is a short-term rate of interest, and its influence on longer-term rates is precisely similar to that of the Time Deposit rate as explained in this paragraph.

same moment a Time Deposit. But every business can ordinarily switch to some extent from one to another -- can change, that is to say, the distribution of its assets and liabilities in order to profit from changes in relative interest rates. Banks prefer temporary financing, but a business requiring funds temporarily does not necessarily have to go to the bank—it may have some long-term securities which it can sell, or it may be willing to issue to the investing public new debenture claims on itself. A rise in bank-interest charges would therefore, if Stock Exchange prices remained unaffected, cause a flood of sales of securities by firms which now wanted to avoid borrowing from the banks. Actually the stock market, knowing quite well that this would happen if it did not alter prices, proceeds to mark down prices at once—and a fall in security prices means a rise in their yields. Thus the long-term rates of interest rise because operators in securities know quite well that there would be a flood of sales if they did not mark prices down.

The attitude of the banks themselves is apt to reinforce this tendency. When short-term rates of interest rise, the banks find their more liquid short-term assets relatively more attractive, and they think too that the attitude of the central bank in pushing up short rates means that long-term rates are likely to go upward rather than downward in the near future—i.e. security prices are likely to fall rather than to rise. To avoid capital depreciation they would do well to postpone purchases, and rather to sell before prices drop further. The banks thus tend, when short-term rates rise relatively to long-term rates, to 'go more liquid'—to prefer shorts to longs. This tendency of the banks themselves affects the stock markets in the same way as does the business man's inclination to finance himself by selling securities—it increases the general pressure to sell at the old prices, and in anticipation of this selling pressure the stock-market operators mark prices down—i.e. put up the long-term interest rates.

Similarly, when bank interest charges are reduced, the business men would incline towards holding on to their securities, preferring to continue temporary finance at the bank, if stock-market prices did not rise. And the banks themselves will think it worth while to go in for larger holdings of long-term securities. The increased disposition of business men and the general investing public to hold on to their long-term securities, together with the disposition of the banks and other financial institutions to shift from short to long assets, will force stock-market prices upward—that is to say the long-term rates of interest (the yield of long-term securities) will be forced downward.

Thus, even if the direct operation of the monetary authorities is confined to short-term rates of interest, the long-term rates of interest will be driven in the same direction by the market forces whose existence depends on the 'spilling over' of capital supply and demand from one part of the market to the other. The extent to which the 'spilling-over' will cause the long-term rate to move will, however, depend very much on the state of market expectations. Public opinion about the future course of interest rates is a very powerful factor in the long-term market, and a mere reduction of short-term rates may not do much to modify that opinion; and unless opinion is modified little impression will be made upon long-term rates even if the authorities are prepared to operate in the market on a very large scale.

This matter, which is of critical importance to an economic policy depending upon encouragement and discouragement of private investment, may perhaps be better understood by an arithmetical example, using simple (if extreme) figures. If the public thinks that the long-term rate is going to settle in a year or so at 5 per cent., then no matter how low short-term rates fall, the long-term rate will not fall far below 5 per cent. If we suppose $2\frac{1}{2}$ per cent. Consols to be in practice irredeemable, a general expectation that in a year or so the long-term rate will settle at

5 per cent. implies that at that time the price of Consols will settle around 50. Anyone who pays *now* a price much above 50 will have to meet severe capital depreciation in the next year or two. It will be better to hold off the market, holding cash although the latter yields no interest, rather than incur a capital depreciation that would swamp any yield obtained from interest payments on the Consols. A man would do better for himself by holding cash or lending his money out in the short money-market at a very low rate of interest than by buying Consols immediately at 62. A man with £620 to invest in Year 1 could, by buying Consols at once, secure a perpetual income of £25 per annum; but by waiting until Year 3 he could use his £620 to buy Consols yielding £31 per annum; alternatively, he could use £500 to secure the income of £25 per annum, and have £120 'profit' to set against the low interest he has had to take on his £620 during the two years through which he waited for the price of Consols to fall. If everybody expects the market to move in this way no one will buy in Year 1 at 62, and all holders will wish to sell—the pressure of sales unmatched by demand would send the price down, and (on our assumptions) it would in fact fall almost to 50—perhaps to 52, the exact figure depending on the precise level of short-term rates. Thus the effect of a change in short-term rates upon the long-term market is narrowly limited by what people expect the long-term rate to be in the near future; and unless the change in short rates of itself causes a decided change in expectations about the long rates, even a very great change in the short rates will cause only a very small change in long rates.

This importance of the market's expectations about long rates was abundantly illustrated in the experience of London markets during the nineteen-thirties and nineteen-forties. If the authorities want to pursue a 'Cheap Money Policy', it is vital that the market should be persuaded that the long rates are going to settle down at a low level. In 1932 short rates had been pushed by the authorities to

very low levels, but long rates fell relatively little until the great War Loan Conversion announcement. This was made in such a way, the ground was so thoroughly prepared, and the propaganda so struck the minds of the investing public that there was, very suddenly, a general persuasion that the 5 and $4\frac{1}{2}$ per cent. rates of the nineteen-twenties were an abnormality linked with conditions that had now disappeared. Long rates came tumbling down. In the rearmament years the market moved the other way, without any pronounced change in the short-money market. Early in 1937 there was a decided slump in gilt-edged prices, bringing long-term rates of interest clearly above 3 per cent., the immediate occasion being the realization that the Government was about to borrow large sums for rearmament. The investing public and the Stock Exchange reacted to quite an irrational extent. But the mere fact that the City Editor of *The Times*, in fair representation of City opinion, wrote about the market settling down when 'a round three and a half per cent.' (yield on Consols) was reached, meant that the long-term rate *had* to move to something like that level immediately quite irrespective of the fact that there had been in that particular month or so no such revolution in the money-market or general economic situation as would justify an abrupt adjustment of stock prices from a 3 per cent. to a $3\frac{1}{2}$ per cent. basis.

Another example of the power of opinion, backed by a very large volume of privately held government securities which can be thrown on the market to impede a movement of the long-term rate of interest is afforded by the ill-starred 'Dalton drive' of 1946-7. After the successful cheap-money policy of the nineteen-thirties, a 3 per cent. rate of interest was comfortably held throughout the war of 1939-45. Then in 1946-7 the authorities, by exploiting to the full a mechanism which is analysed in Chapter 9, and by propaganda in which the then Chancellor of the Exchequer played a prominent part, forced the long-term rate down momentarily to about $2\frac{1}{2}$ per cent. The attempt

failed fundamentally because the market was convinced that, in the light of the basic economic forces of high demand for capital investment and scarcity of resources, $2\frac{1}{2}$ per cent. was an unnaturally low rate—a rate that could not be held. Believing that $2\frac{1}{2}$ per cent. could not be held meant believing that security prices would fall. Government securities were therefore not worth buying. Their ‘unnaturally’ high prices were only held by continued official support of the market. As more and more holders of government securities came to believe that this was a mere juggling operation and that prices must fall, more and more unloaded their holdings and the official support began to involve an enormous pumping of money into the market. The authorities eventually became frightened of the length to which they were having to go, and ceased to support the security prices. The latter promptly fell away, and the long-term rate was soon over 3 per cent.—a level thereafter held for some considerable time by a free market, because people thought it a level that, given the various government controls, could reasonably be held.

Another example of the force of the market’s belief in a normal or natural level for the long-term rate of interest is afforded by the war-time experience of Denmark, when conditions under the German Occupation provided a frame of almost laboratory simplicity for the study of this phenomenon.¹ Strict price control and other circumstances prevented the development of any investment boom of the ordinary kind, but the Germans pumped more and more money into the system. Individuals and institutions seeking use for idle balances turned to the bond market, and rates of interest fell. But over a period of many years before the war the rate of interest had varied only between $4\frac{1}{2}$ and 5 per cent., and any rate outside this range was therefore looked upon as abnormal, not likely to be held for very long. The pressure of surplus money in the market did

¹ This paragraph is based on a very able article by Kjeld Philip in the *Review of Economic Studies*, vol. xvi (2), No. 40.

force bond prices up somewhat—that is, it forced the long-term rate of interest down. But no matter how great was the pressure of newly created money, the bond rate *would not* fall below about 4 per cent. Rather than buy bonds at prices yielding a lower rate people and institutions would hold cash yielding nothing at all—because they believed that bond prices would soon fall to levels appropriate to the normal $4\frac{1}{2}$ –5 per cent. yield. This fall in bond prices would, it was thought, come with or soon after the end of the war. Important Allied victories, such as El Alamein and Stalingrad, caused falls in bond prices—because they were thought to bring nearer the reversion of the rate of interest to its normal level.

III. *Long-term Rates of Interest, the Availability of Capital Funds, and Investments in Fixed Capital*

The monetary authorities, in attempting to operate on the long-term rate of interest, are thus peculiarly at the mercy of public opinion. Propaganda may help the authorities—but if it is not attuned to the investing public's ear it may make matters worse (as perhaps it did in 1947). In so far, therefore, as monetary policy hangs upon the effect of changes in the rate of interest, it hangs upon a slender thread. Things are, however, a little brighter than that. Rising prices for long-term government bonds—a fall in the 'pure' long-term rate of interest—are logically associated with rising prices for securities generally (including those of public utilities and industrial companies), a greater willingness of the 'investing public' to take up new securities, and a readier flow generally of capital funds into the hands of business men who are ready to spend them on the construction of fixed capital equipment.

In the previous section we were discussing only the prices and yields of government long-term bonds. There are, of course, quite other classes of securities of far more direct interest to the industrial borrower. Besides the government (gilt-edged) securities, there are bonds issued

by public utilities; debentures, preference shares, and ordinary shares of all sorts and sizes of industrial and commercial undertakings; and all these classes of securities are subdivisible into very many grades. At any given moment, however, there will be a certain relationship between the prices of securities of various grades, a relationship reflecting the investing public's preference for one grade as compared with others. *Given* these preferences, a rise in the price of one large class (e.g. government bonds) resulting from monetary operations that have depressed short-term interest rates must be followed by a rise in the prices (a fall in the yields) of all other grades. Provided the public has a definite preference for one particular distribution between the various classes of its assets, a shift in the price of one must be followed by a general shift in the whole range of prices. It is true that the effects of a fall in the prices of government bonds on, say, ordinary share prices may be entirely obscured by a simultaneous shift in the public's preferences in favour of ordinary shares—an actual rise in the prices of the latter following the fall in the gilt-edged market. But the ordinary shares will tend to stand lower *than they would otherwise have done*. The general position in the capital market will, that is to say, have been made, by the movement of government bond prices, less favourable than it otherwise would have been to new seekers of money to spend on capital development.

A fall in the interest rates at which money can be obtained for new capital development will automatically increase the attraction of such development. When a firm is thinking of embarking on some capital extension—whether it be the purchase of a new machine, the doubling of a railway track, the addition of another runway to an airfield, or the sinking of another shaft at a mine—its decision will depend on a number of factors, some purely technical, others economic. The technical factors will include such points as the difference the investment will make to the physical output of the firm, the rapidity with

which the new equipment will wear out, and the ease with which the extension can be fitted into the general framework of the firm's activities. The strictly economic questions will be, what will be the price of the additional product? and at what rate of interest can the purchase money for the new equipment be raised? Given all the technical factors, and given the firm's estimate of the receipts that will be realized from the use of the machine, whether or not the capital extension is embarked upon will depend upon the rate of interest at which money for such purposes can be raised. The lower the rate of interest, the more likely is the firm to decide that the capital extension is worth undertaking. On the other hand, the higher the rate of interest the less attractive is any form of capital extension.

Two examples may help to make this clear. Suppose a printing-works to be contemplating the purchase of another machine of some kind. The machine is, we will suppose, priced by the machine-makers at £1,000. Then the firm calculates that the machine would last twenty years, and that after making allowances for repairs, depreciation, adjustment of labour costs, &c., but not allowing for the interest charges, the use of the machine would make a difference of £50 a year to the gross profits of the firm. Then, as long as the rate of interest, at which the firm can obtain £1,000 for twenty years, is below 5 per cent., a net profit is to be gained from the introduction of the machine (for 5 per cent. on £1,000 = £50). When the effective rate of interest is 5 per cent. the venture is only just worth while—the machine is then a 'marginal' investment. When the effective rate of interest is above 5 per cent., the firm would incur a loss if it acquired the machine in question. It should be noticed that the relevant receipts are the *extra* receipts that would result from the introduction of the machine—whether the firm is incurring a loss or a profit on its previously invested capital is irrelevant (though it may affect the rate of interest at which the firm can obtain the

capital sum required). Or suppose that a railway is contemplating electrification of part or all of its system. The managers have to make a number of estimates of the results of electrification—changes in the volume of traffic, in labour costs, in the costs of electricity, &c. Suppose that their guess is that an electrification plan, which would involve a capital expenditure of £20 millions, would increase the gross profits (or diminish the gross losses) of the company by a million pounds a year. Then, whether the railway was previously paying its way or not, the electrification scheme would appear worth adopting as long as the rate of interest at which the railway could obtain £20 millions was not above 5 per cent. Once the rate rises above 5 per cent., the venture becomes completely unattractive, unless anything happens to make the authorities revise their estimates of the results of electrification, or the costs of the electrification process itself fall.

Not only will these decisions have to be made about *new* capital development: precisely the same considerations must determine whether or not a firm should replace some plant which is wearing out. Reinvestment is only worth while if the firm could not do better for itself by investing the depreciation fund elsewhere.¹ As steam presses wear out, the company can always choose between replacing them and not replacing them, just as it can choose between erecting and not erecting an additional factory:

These examples have been highly simplified in order to enforce the main point—that the effective rate of interest will be one of the crucial factors in coming to the decision whether or not to embark on capital development. But, lest we should overrate the efficacy of an interest-rate policy, it is important to emphasize the extent to which

¹ In extreme cases the relevant rate of interest may be quite different. For the alternative to replacement of, say, a flour-mill, may be holding gilt-edged securities, while extending an established flour-mill may mean issuing new debenture stock for which the public has little taste.

the entrepreneur's estimates are likely to be guess-work. In the railway electrification example given above, it was assumed that gross profits would, as a result of cheaper running, larger traffic, &c., immediately rise to a new level and stay there. In fact this is most unlikely to be the case. The growth in traffic is likely to be a gradual process, and whether the enterprise is or is not worth while will depend to an important extent on how rapidly the growth of traffic occurs. If the growth is very slow, that is equivalent, from the company's point of view, to extra capital outlay, even if the growth does eventually attain the expected maximum. The rapidity of growth is, of course, very much a matter for conjecture. The responsible people will have various earlier experiences to work on; but to some extent every new enterprise is unique, and this is especially true of such big capital innovations as these. Moreover, labour costs and price levels over a period of twenty years or more will be extremely conjectural. As compensation for all these uncertainties, which are involved in the decision to invest, the entrepreneurs will look for some chance of profit, and their stress on this profit margin will vary very much from time to time, according to whether they are inclined to look through rose-coloured spectacles or to take gloomy views of the future.

The uncertainties that obscure the business outlook are thus of great practical relevance to the question of the effect of interest changes. Many of the estimates business men make are necessarily highly conjectural, and against the wide margin of error a fractional change in the rate of interest may appear to make no difference worth bothering about. Far more important is likely to be the business man's general frame of mind about the future. In a depression things look so gloomy that no conceivable drop in the rate of interest is likely to induce him to embark upon any but the most blatantly desirable ventures. In a boom, on the other hand, things look so rosy that a fractional rise in the rate of interest, to be paid on the capital sum required,

is unlikely to deter him from some investment, failure of which appears unthinkable. Even public investments—those made directly by central and local government bodies—are susceptible to similar influences that very easily outweigh the influence of the rate of interest. A town council considering the construction of public baths, for example, will find that the higher the rate of interest, the higher the ‘rate’ in the pound which is necessary for financing the service of the debt incurred for the purpose. But experience, decade after decade, has shown that public authorities are less influenced by a slight difference in the rate poundage produced by a change in the rate of interest than by whether or not they feel that the town is prosperous and ‘can afford’ the public works.

The reservations that we must therefore have in mind, when we are considering the stimulus given by a fall in interest rates to the demand for capital goods, of course apply with varying force in varying circumstances. In most branches of manufacturing industry, for example, a continuous (but not constant) stream of inventions occasions high obsolescence allowances that completely swamp the interest charges on a new machine. On the other hand, much capital outlay by the great public utilities is on construction of earthworks, permanent way, and other items that have very long lives and will not easily be replaced by alternative equipment. For such things as these the depreciation and obsolescence allowances are quite small, and the interest charge is correspondingly more important, and more *visibly* important to the firm or public body that will have to pay the piper. Dwelling-houses are undoubtedly among these items that are relatively ‘interest-sensitive’—the interest on the original capital outlay is a very large part of the annual rent charge. More generally, we can say that the more durable is a capital good, and the less uncertain is its productivity, the more sensitive will be the demand for it to changes in the rate of interest. During the last twenty years, an increasing proportion of investment

in long-lived capital goods (e.g. houses and railways) has come under direct governmental control; in these circumstances investment decisions have come to depend more on broader questions of public policy and less immediately on movements in interest rates.

When the effectiveness of the rate of interest as a stimulant of demand is hedged about in this way, the influence of monetary factors in determining the volume of economic activity seems to be slight indeed. Changes in the rate of interest often, however, receive important reinforcement from the changes in the practical *availability* of capital funds that accompany changes in interest rate when the latter is engineered by the monetary authorities. A cheap-money policy implies a sufficient pressure of money supplies to satisfy all the people and institutions who think that the rate of interest will go up presently and who therefore prefer to hold money rather than government bonds at present prices. Insurance companies, building societies, and ordinary business firms will all be tending to hold rather more money than they would normally expect to hold. It is in fact by this glutting of markets with money that we have supposed the authorities to be enforcing their low interest rates. Now when financial institutions and business firms hold unusually large balances, and are loth to 'invest' them in government bonds, other ideas in course of time enter their minds. They decide perhaps that although government bonds are not worth buying because their prices are high and yields low, it would be worth engaging in some quite definitely speculative proposition that would give an altogether higher yield, in preference to 'holding all that money idle'. At any rate, they may be venturesome with *some* of the money. For business firms especially, the unusually high liquidity of their balance-sheets will tell in course of time—the power of the cautious directors to resist the cajolings of their more venturesome colleague, who wants to set up a branch factory or install a new kind of machine, will be worn down more

easily when there is money in the kitty—or money to be borrowed unusually easily from an insurance company or finance house—than when the cash could be had only by going to the bank and mortgaging the firm's assets up to the hilt. Similarly in the building world: when Building Societies find rates low and their liquid funds are mounting, they will find other ways, as well as cutting mortgage interest rates, for expanding their loan business. They will reduce the first 'down payments' on a house from 20 to 10 or even to 5 per cent., and they will extend the maximum repayment period from 15 to 20 or even 25 years, so as to inveigle poorer and poorer people into buying houses.¹ In a variety of ways the sluices of the capital market will be opened, so that it is not just a matter of loans being cheaper, but of all kinds of enterprisers, who previously could not get hold of money at all, or could not get it on any tolerable terms, now being able to get it to spend on capital development.

With this important reinforcement of abundant availability of funds, cheap money does stimulate the demand for capital goods. Rising demands for new machines and more extensive schemes of capital development lead to rising purchases of raw materials and engagement of labour. Demand for more raw materials simply passes on to other entrepreneurs—those producing raw materials—the onus of engaging more of the original factors of production. Momentarily the increased demand may be met by drawing on stocks; but very quickly increased production must appear. If there has been a large surplus of unemployed factors the increase in production in the capital goods trades can perhaps be effected without drawing much upon factors previously employed in consumption

¹ Building Societies did in fact operate just in this way under the pressure of 'cheap money' in the 1930's in Britain; and their activities played an important part in encouraging the housing boom that helped to pull Britain out of depression. Correspondingly, rising interest rates in 1955-7 were associated with sharp tightening of the general terms on which Building Societies would lend.

goods trades, and therefore without any necessity for a marked rise in rates of remuneration. If, on the other hand, the growth in capital expenditure occurs when capacity (of labour, equipment, &c.) was already more or less fully employed, the capital goods trades are able to increase their resources only by offering higher remuneration. In either event, the next stage of the process is that the money incomes of the people in the country will have increased—either because a greater number are employed at the old rates of remuneration, or because people formerly employed are now receiving higher wages, &c. (Normally both results will appear quickly, though the latter will be more prominent in the later stages of an inflationary movement.) This increase in income will be devoted partly to savings and partly to increased expenditure on consumption goods. To the extent that it goes the latter way, firms in the consumption goods trades will be induced to expand production, thus adding further to the money demand for the factors of production. Then the provision of both working-capital and fixed-capital for the consumption goods trades will, as a result of higher prices and a generally more prosperous atmosphere, appear more attractive than before. The same change in atmosphere will be making public bodies also more inclined to embark on expensive public works and, in addition, the private capital extensions will have created a demand for public capital extensions like new roads, extended electricity cables, drainage schemes, &c. A very decided upswing in economic activity may thus eventually get under way.

At the same time, falling interest rates and greater availability of funds make instalment credit for consumers both cheaper and easier to get. As the growth of consumer's durable goods makes this kind of credit more important, this effect of easier credit conditions also becomes more important, reinforcing the upward movement in total demand for goods and services.

The converse process may easily be deduced from the

above. When interest rates rise and there is less money about seeking investment outlet, capital extensions become less attractive and more difficult to finance. The 'awkward' director, pointing to the company's balance-sheet, is able to defeat the brilliant technician whose replanning of the factory would be so expensive. Employment in the capital goods trades shrinks and total money income follows suit. Consumers adapt themselves to this shrinkage in money income partly by saving less (in individual cases often dissaving) and partly by cutting expenditure on current consumption. Instalment credit for the purchase of cars, refrigerators, and the like becomes more expensive and more difficult to obtain. Production and employment in the consumption goods trades decline, capital investment in those trades becomes less attractive, the activity of the capital goods trades shrinks even further, and so on.

Thus, through devious channels connecting short-term rates with long-term rates of interest, and connecting long-term rates and the availability of capital funds with the pace of capital replacement and development, the monetary authorities may hope, by their actions in regulating the supply of money, to influence the level of economic activity. The strength of this influence has perhaps sometimes been overrated and economists are nowadays more inclined to stress other, more direct, methods of stimulating or checking business activity. But even those most sceptical of the monetary weapons would agree that such influence as the monetary authorities have should be directed towards the major objectives of government economic policy. A restraining policy—a 'disinflationary policy' as it is sometimes called—demands the aid of a restraining monetary policy. The positive contribution of the monetary weapon may be slight, but at the very least it should be creating a climate favourable to the general restraint (or stimulus) being exercised by government economic policy more generally. The major reason for not expecting much from monetary weapons is that they do

not work *quickly*. This is highly relevant to many situations, when quick results are imperative. On the other hand, a persistent disequilibrium—whether a persistently excessive pressure of demand or persistent unemployment—calls for firm use of the weapons of monetary policy simultaneously with other measures.¹

At times in the past monetary policy has been held to have exercised much greater effect than it is believed to have nowadays; and it may well be that it was then more potent than it is now. The complications in the long argument given in this chapter are not always or in all places of equal force, and it would be very surprising therefore if the monetary weapons of 'cheap money' and 'dear money' had the same force at all times and in all places. The practical conclusions of an economic argument depend upon institutional assumptions that have no universal validity, and the comparative usefulness of monetary weapons must therefore be judged by every generation and by every country for itself. That the climate created by monetary policy should *accord* with the general economic policy of the Government is, however, a proposition of universal validity, and it is this proposition that provides the ultimate justification for subordinating the central bank to the machinery of democratic government.

¹ On all the questions discussed in this chapter the reader should refer, for an interpretation of recent British experience, to Chapter VI of the *Report of the Committee on the Working of the Monetary System* (the *Radcliffe Report*), 1959.

COMMERCIAL BANK LIQUIDITY AND LENDING POLICY

1. *Economic Significance of the Distribution of Assets*

THE alleged powerlessness of bankers to influence the general economic situation has sometimes been formulated in statements of this kind: 'The banking system determines the aggregate of bank money in existence, but the public alone decides the use to which that money shall be put.' We have already seen in Chapter I that this sentence is internally inconsistent, for, given the relative unattractiveness of a money balance, control over the supply of money implies influence over the spending of money. In previous chapters we have seen how the banking system derives from its control of money supplies some influence over rates of interest, and how this in turn gives it some influence over the spending of money. This same proposition may be put in another way, by saying that the banks can initiate a change in the economic situation when they exchange assets with the public—giving bank deposits and receiving assets such as cash, bills of exchange, government securities, business men's promises to repay, and so forth. At any moment the public prefers to distribute its stock of wealth between different classes of assets in one particular way rather than any other way.¹ If the banks change that distribution of assets, by causing the public to hold more bank money and less of certain other classes of assets, that change must inevitably force repercussions on the entire economic situation.² The

¹ The relations between various parts of the structure of interest rates depend on the public's scale of preferences for particular classes of assets.

² This follows from general equilibrium analysis of the Walras type.

general nature of these repercussions has been analysed in Chapter 6. We there assumed that the methods of commercial banks were more or less those of present-day England. But the current English system need not be considered a model from which all other possible systems are more or less despicable deviations! And in any case we must, if we are to understand how far the analysis of the above-mentioned repercussions depends on certain banking methods, look further into the details of commercial banking methods. The initial form at least of the repercussions following a redistribution of assets obviously depends on the particular classes of assets which the banks choose to take in exchange for bank deposits. What is the basis of the commercial banks' scales of preferences for different classes of assets? How far are those preferences open to modification? What influence do they have on the efficacy of central banking? What are the implications for the future of commercial banking?

11. *The 'Liquidity' of Bankers' Assets*

The ultimate object of a commercial bank is to make profits for its shareholders. The profit is derived from the income attached to the assets it is enabled to hold by the public's being willing to hold the bank's debts (deposits) as money balances. The profits are greater the higher the yields of the assets it holds. They can quickly be turned into losses if the capital value of the assets falls; but such a fall may be relatively harmless if continuing public confidence allows the bank to continue holding the asset. Indeed, the possibility of earning profits at all depends absolutely on the public's acceptance of the bank's debts. There must be 'confidence' in the bank. The public accepts the bank deposit as being 'as good as cash'. Public confidence in the bank depends therefore on the belief that the bank will always be able to exchange deposits for cash on demand. Power to offer cash in exchange for

deposits is therefore a prerequisite of the profits which a commercial bank is seeking.

'Liquidity' is the word that the banker uses to describe his ability to satisfy demands for cash in exchange for deposits. To earn profits at all the banker must maintain confidence. To maintain confidence he must maintain an adequate degree of liquidity in his assets. The perfectly liquid asset is, of course, cash itself. The more cash a banker holds the more obviously can he, without any difficulty of any kind, offer cash in exchange for deposits. But cash is an 'idle asset'—it earns no income at all. To make a profit the banker must hold some assets which are imperfectly liquid.¹ What should be the nature (other than income-earning) of the imperfectly liquid assets of a bank? The answers which bankers have given to this question have generally left an ambiguity about the word 'liquidity', an ambiguity that has its root in the banking conditions of earlier days. To satisfy depositors' claims a bank must be able to convert its assets into cash *quickly*. But that is not all. If the depositors' claims are to be fully satisfied the bankers' assets must be convertible into cash *without loss*. When bankers have said that they aim at liquidity they have generally included *both* these attributes.

The ambiguity is realized at once when we ask whether long-term British Government securities are highly liquid or relatively illiquid assets. The uncertainty of bankers' treatments of this question has its origin in the ambiguity of their use of the term 'liquidity'. The securities can be turned into cash very quickly, for there is an excellent market for them on the London Stock Exchange. That is to say, these particular assets are readily shiftable on to other banks or institutions or persons willing to supply cash. But the amount of cash that can be so obtained

¹ There is the possibility that a State institution can perform the business of creating a readily transferable asset for public use in settling debts, meeting the cost by charging individuals a commission on the amount they draw; it is difficult to imagine how a private enterprise could make its liabilities sufficiently attractive to enable it to run on the same basis.

depends upon the market price at the moment—it may be more or less than the price at which the bank acquired the asset. Only by waiting until the distant maturity date can the face value certainly be obtained. This asset is attractive to the banker in that it is shiftable and, if he can wait until the maturity date, devoid of risk of loss. But it is unattractive in that earlier realization may involve the banker in a capital loss. It is wellnigh perfectly 'shiftable', but despite the absence of any risk of the British Government's not meeting its obligations the security has not all the qualities the banker includes in perfect liquidity.

The distinction between shiftability and the second attribute of liquidity may be further illustrated by reference to the ordinary shares of an outstanding industrial company—say Imperial Chemical Industries. A bank holding such shares could turn them into cash very quickly by selling them through the Stock Exchange where these shares enjoy a wide market. But there would be all sorts of risk of loss attached to these securities and, despite their very high degree of shiftability, the banker would probably describe them as illiquid. Contrast the example of a bank (or individual) lending to a traveller going to Tibet or to explore the Desert of Gobi. The lender may well know the traveller to be an honest man who will make a point of paying his debts when he returns. The debt may be well covered by assurance of the traveller's life, the policy being held by the creditor. There may thus be practically no risk of loss attached to the loan—but a bank may well hesitate to offer a bank deposit in exchange for the traveller's promise to repay. For it would be very difficult to arrange for some other institution to take over, in exchange for cash, the bank's claims against the traveller while the latter was in the middle of the Desert of Gobi. The asset would be shiftable only with great difficulty, and, despite the virtual absence of risk, the banker would describe the asset (the traveller's promise to repay) as illiquid. Many

bank loans to business men are probably more or less like this: the bank managers know that the firm's assets amply cover the amount of the loan, and that the firm is an honest one, but the informality with which the loan has been arranged between banker and customer makes it shiftable only at considerable inconvenience. To many other business loans serious risks of loss are also attached. The banker rightly ranks his loans on overdraft arrangements among his least liquid assets.

The astute reader will have noticed, particularly in the discussion of the example of British Government securities, that shiftability and low risk of loss as the two elements that constitute the banker's liquidity are not completely disentangled. *If the banker can wait until maturity* there is no risk attached to a redeemable British Government bond. If, therefore, the banker has a fair proportion against deposits of assets that have high shiftability and low immediate risk (cash being the extreme case), he can feel reasonably secure in holding some assets that are highly shiftable but only riskless if not shifted. Similarly, if he has a fair proportion of the most liquid assets, he can afford to hold some assets that have a low risk degree but also low shiftability. Assets that are both unshiftable and risky will be viewed with much more disfavour. The banker must, that is to say, pay regard to both aspects of liquidity at once. He should always have some assets that have both attributes clearly. In addition he should have some assets with a high degree of shiftability that involve no risk of loss if shifting can be avoided. His remaining (less shiftable) assets should at least not involve him in losses. These are among the fundamental rules of sound commercial banking.

We must now look more closely into this matter of 'shiftability'. One particular commercial bank can look upon some of its assets as readily shiftable on to other banks or non-bankers willing to diminish their balances. For the purpose of meeting temporary adverse Clearing

House balances or for meeting a run that is, for domestic reasons, restricted to one bank this shiftability is adequate. But a much more dangerous situation may arise. The demand for cash in exchange for bank deposits may not be confined to one bank. Indeed, if a crisis arises it is unlikely that a run will be restricted to a single bank. The more consolidated the commercial banking structure the more likely is the demand for cash to be generalized. In America the correspondent connexion between unit banks is apt to be a channel through which shocks to one bank can pass to many other banks. In a country where the business is all in the hands of a few great banks serious disturbance of one of those banks is bound to cause such a disturbance of the entire economy as to spread the difficulties to other banks. Such considerations as these make it imperative to think of shiftability very much in terms of shiftability on to the central bank—the lender of last resort, the ultimate source of cash. In judging the shiftability of any asset regard must be had primarily to shiftability (either direct or indirect) on to the central bank. The eligibility rules (the rules by which the acceptability of assets is determined) of the central bank are therefore of vital importance to the liquidity of the commercial banking system.

Maximum shiftability is attained by assets that can be most readily shifted on to the central bank. This depends entirely on the eligibility rules of the central bank. Generally speaking central banks will give cash on demand for Treasury Bills and bills of exchange fulfilling certain conditions. Why these happen to be the typical eligibility rules of central banks we shall discuss in the next section. We may simply add here that since the implications of central banking have been fully understood there has been a disposition to extend eligibility to other classes of assets. Any such extensions are subject, however, to obstacles not placed in the way of the rediscounting method of obtaining cash. Treasury Bills and bills of exchange which meet

central bank requirements are therefore *generally* the most 'liquid' earning assets; but not in London. The rediscountability of a bill makes it very attractive for its shiftability; but the length of its life—typically three months—implies risk of a small loss. For if the bill is rediscounted at a higher rate of interest (discount) than that at which the commercial bank took it, there may be a capital loss.¹ The shorter the life of the bill the smaller is the loss that may be involved in rediscounting. Hence the preference of banks for short-dated bills. The 'eligible' bill is a highly shiftable asset, and becomes less risky as it approaches maturity. London, with its highly developed discount market and its system of indirect contact between the central bank and the commercial banks, has been able to provide the banker with an even more liquid asset. The call loans to the discount houses have the shiftability advantages of bills of exchange because the Bank of England is always ready to give the discount houses cash in exchange for the eligible bills which the commercial banks expect to be deposited as collateral security for their loans to the discount houses. But if the banks want to obtain cash they can call in these loans and secure *the full sum originally lent*, with interest at the prearranged rate. There is no risk of loss. In London, therefore, the Money at Call, in so far as it is covered by eligible paper deposited by the discount houses, stands next to cash in order of liquidity. After that, and immediately after cash in other banking systems, come Treasury Bills and bills of exchange in order of their nearness to maturity. The very slight risk there is of wholesale default by all the other names on an eligible bill of exchange is the only reason for placing Treasury Bills before ordinary bills of the same maturity. No other assets are so shiftable. Wherever there is a well-developed central-banking system banks are apt to consider their proportion to deposits of these highly liquid assets as almost as important as their cash ratios and their readiness to expand

¹ As explained on p. 51-52 above.

on the basis of increased cash may be checked by a scarcity of these assets.

III. *The Attractions of Self-liquidating Paper*

But so far we have, in a sense, evaded the issue. We have said, in effect, that commercial banks have a certain preference for those assets which the central bank prefers. To understand the problem thoroughly we must ask why the central bank has historically preferred assets of certain types, and the superficial answer unfortunately seems to take us round the circle again. Whether we look at the United States, which to some extent viewed the problem independently, or at England, or at the many countries which have simply followed American or English practice, the ultimate answer to our historical question is that central banks have, in order to protect themselves against loss and to discourage bad banking, preferred 'sound banking assets'. The ultimate reason for bills of exchange (and derivatively loans to reputable houses collaterally secured by bills) being considered 'sound banking assets' still eludes us.

We have only to glance at the literature of banking to find the banker's own explanation of the bill of exchange constituting 'a sound banking asset'. The bill of exchange, says the banker, is the ideal *self-liquidating paper*. The kind of bill a banker likes has its origin in an actual commercial transaction—say the export of Australian wheat to England—which will bring money into the hands of the debtor automatically at the end of a very short period of, say, three months. The banker simply has to sit back in his parlour for that very short time while the wheat is coming across to England, and the debtor will meet his bill without the slightest difficulty, provided, of course, that the debtor is an honest man—and the banker looks for reputable names on the bill to guarantee that he will receive in due course *the money that is bound to emanate from the conclusion of the transaction*. The banker has his theory of

self-liquidating paper in mind not only when he is taking bills of exchange but also when he is making advances to business men—a loan for the purchase of raw materials needed to meet an order for the business man's product is normally more attractive to the banker than is a loan to an undergraduate to enable the latter to complete his university course. The great difference between the bill of exchange and the informal commercial loan is that in the former case there is, and in the latter case there is not, a negotiable legal instrument that greatly facilitates the shifting of the loan. And if we want to know why the bill method is used in one case more than in another the answer is that bankers have devised the negotiable legal instrument to increase the marketability of those assets which, by reason of bankers' taste for their 'self-liquidating' nature, already have most chance of finding a market. The existence of a legal instrument called a bill of exchange is not the hall-mark of the self-liquidating asset.

A self-liquidating loan is thus one which the debtor is thought sure to be able to repay, because there is evidence (often in the shape of shipping documents or warehouse receipts held by one of the parties) that he is engaged in a genuine commercial operation, closure of which will provide him with the wherewithal for repayment. But, to revert to our example of the Australian wheat exporter, will the closure of the transaction—the sale of the wheat in England—necessarily enable the debtor to repay? That depends on the price the wheat realizes. The loan arrangement will generally, by keeping the amount of the bill below the expected sale value of the wheat, allow some margin to cover a slight unforeseen fall in wheat prices. If, however, there is a catastrophic fall in wheat prices before the cargo of Australian wheat comes on the market, the transaction itself provides no guarantee of the debtor's ability to meet the bill on maturity.¹ And what generally

¹ I ignore, for the sake of simplicity, the complicating fact that the merchant will probably have 'hedged'. Readers familiar with the process

prevents such a catastrophic fall of prices? The maintenance of the supply of money. If bankers, in a misguided attempt to 'liquidate' their assets, refuse to take up any new bills and do simply sit back in their parlours and wait for the maturities of the bills in their portfolios, there is a catastrophic fall in the supply of purchasing-power and the catastrophic fall in prices which makes it impossible for debtors to meet bills out of the proceeds of their operations. Only by maintaining their assets can banks maintain the 'self-liquidating' character of a substantial class of them. The banks are for the most part important direct lenders in the short-term capital market, and the availability of means to pay off maturing short-term debts depends essentially on the banks' readiness to make new short-term loans. The certainty there appears to be that holding a bill will not involve a bank in loss if only the bill is held to maturity depends on the assumption that the banking system as a whole will not be contracting credit. Hence the widespread ruin of even the 'soundest' of institutions if a crisis is allowed to go unchecked. On the other hand, it is within the power of the banks themselves to ensure that bills will be met at maturity (always provided the various signatories are honest).

It might at first glance be supposed that the same argument should be applied to the market for long-term securities and that these could, by the action of the banks themselves in always supporting the market, be made equally attractive as liquid assets. Against this there are two substantial objections. First, the central bank may want interest rates to rise, and in pursuit of this aim the central bank will have to keep the cash basis small enough to deter the commercial banks from supporting the gilt-edged market. A rise in the long-term rate of interest implies a much greater fall in the market prices of securities than a rise in short rates causes in the capital value of

will realize that my conclusion is unaffected if the appropriate complications are introduced.

short-term bills. Consequently, the banks have always to face the possibility that their balance-sheet position will be vulnerable if they hold a large proportion of long-term securities, no matter how 'safe' these securities are in the sense of certainty of full repayment at maturity.¹

Secondly, even if there were assurance of stability in long-term interest rates, there remains an objection to long-term financing of industrial and commercial activity. Traditionally bankers, as providers of short-term capital for traders, have been accustomed to consider primarily a borrower's honesty and good faith *and his balance-sheet position*. If the honest borrower has a reasonably liquid position—if he has stocks of marketable raw material and finished products, and goods in process that will emerge as marketable finished products fairly soon—he can be counted upon to repay a temporary advance. A provider of long-term capital, on the other hand, is concerned not so much with the balance-sheet position as with the *long-term earning capacity* of the borrower. Assessment of earning capacity is a task very different from assessment of the current balance-sheet position. It calls for a long view of markets, both for raw materials and for products, of technical possibilities, of labour supplies, and of the likelihood that the firm will maintain an adequate level of managerial competence. Assessment of all these factors can be reasonably undertaken only by large groups of specialists, each one specializing in one or a few industries. The traditional bank manager is not qualified for such 'industrial consultant' work. Ability and training of one kind are required to judge whether A, B, C, &c., will be solvent in three months' time: quite other abilities and experience are

¹ If the central bank appears, over a sufficiently long period, to be firmly attached to a policy of stable interest rates, the force of this objection is weakened and bankers become willing to enlarge their proportion of long-term securities. This was at least beginning to happen in the U.S.A. in the period 1945–51, when in deference to Treasury ideas the Federal Reserve System itself supported the long-term securities market at fixed prices.

required before a man can judge whether A (let alone B, C, &c.) will be solvent in twenty years' time. It is this distinction that lies behind the traditional view that a banker should make only 'self-liquidating' loans, and the discredit into which the naïve theory of self-liquidating loans has rightly fallen does not justify forgetfulness of the important truths that lie behind it. Now that full understanding of central banking has made all assets ultimately shiftable on to the central bank, bankers must not imagine that all assets are 'liquid'. The loss-avoiding aspect has to be remembered, as well as the shiftable aspect of liquidity. If losses are to be avoided, the risks taken should not fall outside the practicable range of the bank manager's judgement.

IV. *Some International Comparisons*

Ideas about what constitutes 'sound' banking—the ideas analysed in the previous section—have grown up mainly in England during the last two hundred years, but the basic principles are to be found all over the world. This fundamental common element in all banking systems has not, however, brought about uniformity in the assets-structures of the commercial banks in different countries, and in this section we must consider some of the differences that mask the fundamental similarity of attitude.

International differences in the assets-structure of commercial banks depend on two factors: the structure of the rest of the capital market and the extent to which classical notions of good banking have penetrated each country. Of these two factors the former is nowadays much the most important. England has never had a monopoly of sound banking ideas, and in the more backward countries the penetration of the great international banks has helped to spread classical banking thought. The non-availability of assets of particular kinds and the pressure of business interests for assistance unobtainable elsewhere have in general been responsible for the main divergences of other

commercial banks' distribution of assets from those typical in England. To take the clearest example, Money at Call and Short Notice in England consists largely of loans to the discount houses—highly liquid loans, almost as good as cash. But the great majority of countries have no discount market whatever. The most attractive type of banking asset is simply unobtainable. Government bonds are generally nowadays available in amounts large enough to meet any bank's conceivable requirements; but a South American bank may well feel disinclined to hold a large block of the bonds issued under a constitution that may be suspended next week! Such a bank can, it is true, hold the bonds of some other government that can be relied upon to meet its obligations, but the investing bank then has to take the risk that the foreign-exchange rates may move against it. Just as loans to the discount market are larger in England than anywhere else, so holdings of government securities are apt to be small in South American banks and large in Indian banks. The financial record of a country's government is, of course, not the only factor influencing the banks' willingness to hold government securities—in Australia, for example, the abundance of other outlets for their funds is such that the banks hold even less of government securities than do some banks of the unstable South American states.

Given that he is adequately provided with the most liquid assets—above all cash—there is one general class of assets universally sought by bankers. This consists of the loans to business men, made either under an overdraft arrangement or by the discounting of a bill of exchange. In London, and to a less extent in some other centres, the bill of exchange often receives the signature of some specialist institution which makes itself responsible for the debtor's solvency. But more generally the bill of exchange method approaches the ordinary advances method. Which type of arrangement predominates is apt to be the outcome of historical accident; but the development of central banking has tended to encourage the bill of exchange

method, as it provides a legal instrument that can be more readily transferred than the somewhat informal bank advance. The bank advance has one great attraction for the banker: it is more profitable than any other asset. This higher yield is due to the fact that the personal risks attached to such loans make them an unattractive investment for people who have not the facilities of bankers for investigating the credit-worthiness of borrowers. The loans have, as we have seen, certain disadvantages also for the banks; but the higher return compensates the banks for the relatively low liquidity and the risks involved. Within limits, therefore, the banker rejoices in a business man's demand for a loan. The bigger the outlet for such loans the smaller in general will be the proportion which a bank's other assets bear to the total. Opportunity for taking up these attractive assets may even induce the banks to lower their normal cash ratio (i.e. expand total assets when the cash has not expanded).

A high-class bill of exchange can normally be discounted at rates much lower than those charged on bank advances. This difference reflects the greater security given to the bill by the signature of an acceptor of high standing and by any other signatures which the bill bears. The acceptor bears the immediate risk of the debtor's defaulting. His, therefore, is the work of sifting the creditworthiness of debtors, a function performed by the bank when it is making ordinary advances. Despite the lower yield, banks choose to hold some bills because of their great shiftability. Bills also yield on the average less than medium- and long-term government securities, while the latter yield less than the ordinary bank advances.

The broad classification of commercial bank assets into cash, bills discounted, advances, and investments (mainly government securities) is practically universal. All banks have to hold some cash; they choose to hold some bills because their great shiftability compensates for the low yield; the high yield of advances attracts the bankers; and

investments give a safe core to those earning assets that can be left undisturbed for years at a time. Apart from the varying distribution of these assets from country to country, which we have discussed above, the most important difference has been in the demands which bankers have been prepared to meet by making advances. Traditionally the English banks have been willing to meet business men's demands for advances only if the latter have been required to finance working capital—purchase of raw materials, wage-bills on long contracts, &c. The English bankers have always had in mind the question: Is the money needed for a 'self-liquidating' transaction? Accordingly they have been inclined to frown upon demands for the financing of fixed capital—factory extensions, new machinery, &c. Their presumption against financing is, however, subject to exception when a firm wants accommodation only until it has been able to obtain long-term capital from some other source. Certain banks have also from time to time become notoriously interested in the fixed capital of industry (e.g. the cotton industry in the inter-war period); but this has been the result of being unduly generous in providing temporary finance at the top of a boom - it has not indicated any deliberate change of policy. The general presumption against lending for long-term purposes has been based on the theory of self-liquidating paper discussed earlier in this chapter. It has perhaps been unfortunate that the banking canons have been formulated in such a way that emphasis has been placed on the period of the transaction rather than on the basic fear of incurring losses. The idea that a short loan was necessarily a safe loan and that it could not encourage such inflationary development as would inevitably result in a crash¹ did sometimes close the eyes of bankers to the

¹ The fallacy of this idea has been exposed in various ways: two quite different approaches are those of Robertson's classic passage on the 'Four Crucial Fractions' in his *Money* and Machlup's 'The Liquidity of Short-term Capital' (*Economica*, 1932, p. 271).

risks they were running. Hence the accidental interests of the banks in the fixed capital of collapsing industries.

In the present century the rules by which English bankers judge the attractiveness of loans have been appreciably modified. There is still no general disposition to involve a bank in the permanent financing of the fixed capital of industry; but bankers are willing nowadays to make temporary loans for such purposes and for the anticipation of individual incomes if first-rate collateral security can be deposited. Mortgages on real property or life assurance policies are commonly regarded as such security (within limits, of course). A bank that lends a tradesman sufficient to buy a motor-van, the tradesman having deposited as security a life assurance policy the surrender value of which covers the loan, is taking virtually no risk.¹ Title-deeds to real property are of course not quite such attractive collateral, but if the margin between the amount of the loan and the current market value of the property is large the bank may well feel justified in making the loan. Banks may even, in the case of customers whose professional, industrial, or trading position is known to the bank and whose reputation of creditworthiness is beyond suspicion, make loans for any purpose without requiring any collateral security. No doubt all these things were done in the nineteenth century; but whereas in those days the speeches and books of bankers frowned upon such transactions as rather shady banking, the books of today discuss them as perfectly respectable transactions. Any change that focuses the attention of bankers on gauging risks of loss rather than ill-formulated rules of thumb is all to the good.

At the same time the advantage of scrapping the old rule of thumb must not blind us to the fact that the bankers remain subject to the general business atmosphere

¹ Nevertheless, the shrewd banker will consider whether the business extension that occasions the loan is a sensible project for his client to venture upon.

from day to day. In prosperity they will be human enough to under-estimate risks of loss and in depression they will be human enough to over-estimate risks of loss. In America in the nineteen-twenties the commercial bankers often involved themselves in heavy losses not because they made loans on real property but because they took for permanent prosperity what proved to be only a passing phase. Against such dangers there are no fool-proof rules for commercial banking.

The tendency for English bankers to recognize the shortcomings of the nineteenth-century's golden rules seems unlikely to lead to any such radical change as would approximate English banking to the traditional continental model. Rather the tendency appears to be for continental banking to imitate English. On the Continent the commercial banks were traditionally more deeply involved in industrial interests than were the English banks. This was largely the result not of different banking theories but of the different order of events in economic history on the two sides of the Channel. Industrial development on the Continent was often much more rapid—the rise of the large firm was often too rapid for its capital needs to be met in the piecemeal way in which English industry had obtained its long-term capital. Banks were often established with some definite view of mobilizing the savings of the country for the benefit of the new industries which were rising so rapidly.¹ Continental industries generally looked to the banks to provide them not only with working capital but also with fixed capital. Frequently (for example, in Germany) the general plan was for the banks to provide capital at the outset; later, when the firm became well established the banks would issue the stock to the general investing public. In less advanced countries the banks would more often retain a large interest in a company

¹ The contrast between continental and British connexions between banks and industry has generally been exaggerated: I do not intend the broad contrast drawn above to be taken as a complete picture.

permanently. In France the business of providing the bulk of industrial capital has been in the hands not of the ordinary banks but of specialist institutions which have not all the attributes of ordinary commercial banks.

The old continental system has certainly had its attractions for business men. Particularly the rather small industrial units, which find it so hard to obtain long-term capital in England, sometimes looked with envy on their continental brethren. But when we refuse to accept the theory of self-liquidating paper we need not jump to the conclusion that English bankers should emulate the pre-1930 habits of their continental brethren. We must not forget that risk of loss is what the banker should always bear in mind. Long-term interests in particular industrial concerns imply substantial interest in the fortunes of the companies a long while after the initial loans have been made. It is not possible for a banker to have sufficient far-sightedness to avoid great losses once he has involved himself deeply in particular concerns. And it is difficult for a banker to be otherwise than deeply involved unless he restrains himself within some such limits as those set by the English tradition. The experiences of the 'mixed banks' of Europe were accordingly not at all happy. 'The last great slump (following 1929) left behind it a weighty legacy of banking losses resulting from industrial losses. There would have been banking losses anyway; but the authorities in various countries rightly took the view that mixed banking did much to increase the risk of severe banking crises, and in many countries legislative action afterwards compelled the mixed banks to separate from their work as deposit banks their work as industrial investment trusts. The two functions are now performed by completely independent companies.'¹ The success of British banks in withstanding the crisis naturally encouraged this process of 'purifying' deposit banking elsewhere.

¹ The separation of American banks from their security affiliates, though having similar results, proceeded from rather different causes.

Thus, although the application of general notions is bound to vary from country to country and from time to time, the present position is that the traditional English bankers' abhorrence of deep interests in particular industrial concerns and their preference for widespread short-term loans prevail. We may regard as typical the attitude of the banker who, refusing to encourage the foundation of great new industrial plants, sits in his bank parlour and waits for the established and successful man to come along for some temporary loan. The frequent complaint that the great branch banks are less willing than the old private banks to help the small man perhaps has its root in this increasing passivity of the bankers of the world rather than in a contrast between the private banker and the local manager. Our justification of the bankers' passivity suggests that the complaints should not be met by a revolutionary departure from the established English methods, in the direction of earlier continental banking. Rather the gap now left should be filled by new specialist institutions. To some extent such institutions are appearing—the Agricultural Mortgage Bank in this country and the analogous Rural Credit Banks in many other countries are examples; Belgium has quite a wide range of specialist institutions catering for various classes of borrowers. In Britain in the nineteen-thirties 'Credit for Industry' and the Bankers' Industrial Development Company attempted to meet similar needs in the industrial field, and in 1945 two industrial finance companies, officially sponsored and drawing their funds chiefly from the banks, were established for the purpose of undertaking long-term industrial finance of the kind that makes an ordinary banker uneasy. In the United States the tendency has been for banks to spread with their banker 'correspondents' the longer industrial risks, and in such cases they have taken the logical step of developing specialist industrial consultant departments.

v. Changes in the Demand for Bank Loans

The willingness of bankers openly to satisfy a wider range of credit needs is evident also in the interest now taken in the field of hire-purchase or instalment credit. The tremendous extension during this century in the production of durable consumption goods (automobiles, radio and television sets, washing machines, refrigerators, and all the rest) has opened new possibilities for reasonably safe lending to the large numbers of people who depend on regular salaries or wages and who can just afford these new kinds of consumption. For many years bankers fought shy of this activity, as alien to their traditional business of financing the temporary needs of the business man who could pay off his overdraft as his product passed into the market. But the pressure to find new borrowers for ample resources has proved too great, and banks in most of the more advanced countries now commonly lend to specialist finance companies which in turn lend to the consumers, or to the traders who grant instalment privileges to the consumers. This tendency has been accentuated in recent years, partly because business in 'consumer durables' has grown and partly because the banks, encouraged by the extraordinary small scale of losses, have been more willing to lend for this business. In the United States many banks now finance the consumers or retail traders directly; in England the banks have not yet come to this, though in Scotland one bank has a subsidiary company engaged in direct lending.

The widening range of lending by the commercial banks—a tendency also noticed in the United States—is partly due to the growing confidence of banks that have a lengthening record of success, and partly to the pressure of abundant funds in the extraordinary conditions of the middle nineteen-thirties and the second half of the forties. But it is most of all the bankers' reaction to the relative shrinkage, over many decades, of the customary sources

of the demand for bank credit. The demand for bank advances has, I believe, been subject to secular decline for five reasons: industrial integration, the relative decline of industries peculiarly dependent on bank credit, the growth of specialist credit institutions, the development of stock markets, and the increase in cash payments in retail trade. The relative importance of each of the five suggested reasons varies from country to country.

Industrial integration affects the demand for bank loans through the workings of the laws of chance, if nothing else. Industrial firms, like individuals, hold balances to meet contingent divergences between receipts and outgoings. Some of these divergences are orderly, being connected with seasonal movements of one kind and another. Only the smaller of these seasonal divergences will ordinarily give rise to the holding of balances. The less easily foreseen divergences are those which give rise to most of the holding of balances, and their distribution is naturally a chance distribution. The more chance variations are aggregated, the less is the aggregate itself likely to vary. The balance held by one big firm is therefore likely to vary relatively less than would the balances of twelve firms each one-twelfth the size of the big firm. It is but a short step from this to the proposition that, given the preference of business men to hold balances rather than overdraw their accounts, the one big firm is likely to use overdraft facilities less than the twelve small firms whose fusion constituted the one big firm. Big business means, on sheer laws of chance, small overdrafts.

There is good reason to suppose that industrial integration tends to reduce overdrafts for another reason. We have mentioned above the fact that seasonal divergences between receipts and payments will give rise to converse variations in balances only if the divergences are relatively small. A small firm, having to make provision for a seasonal excess of payments over receipts, faces the choice between holding an idle balance over the excess receipts

season and overdrawing in the excess payments season. Which it decides to do we cannot decide *a priori*; but some certainly choose to overdraw in the excess payments season. The big firm, on the other hand, does not face this choice of evils. Instead of holding an absolutely barren balance over the excess receipts season it can lend the money out at short-term—by taking up Treasury Bills, or depositing with discount houses for example. Or perhaps it will leave the money as a bank deposit standing in its own name, wringing from the bank exceptionally favourable treatment. It may even invest the money in bonds nearing maturity. The big firm can and the small firm cannot afford to do this because in the costs of investment and disinvestment there are great economies in large transactions. Thanks to its ability to secure some appreciable interest on its temporarily surplus balances, a huge firm like Imperial Chemicals need never contemplate the possibility of overdrawing in an excess payments period. This is avowedly an extreme example; but it serves to emphasize the tendency for use of overdrafts to decline as a result of firms becoming of sufficient size to enjoy economies in investment and disinvestment of short-term funds.¹

The relative decline of industries peculiarly dependent on bank credit is probably far more important in the United States and Canada than in England. In those countries agriculture has been notoriously dependent, apart from limited government aid, on the banks for a large part of its capital. The public utilities and the manufacturing and the mining industries which are nowadays bulking relatively larger in their national economies have never been greatly dependent on bank credit. They have

¹ Keynes suggested (*Treatise on Money*, vol. i, p. 42) that the bigger firms make more use of the overdraft. But detailed information available in the United States (used by N. H. Jacoby and R. J. Saulnier, *Business Finance and Banking* (New York, 1947)), shows that in that country it is the medium-sized and (most of all) the small firms that use bank advances. In England use of bank advances is more evenly spread; in 1955-7 the big firms became more dependent on them.

been able to finance themselves largely by tapping the stock markets. The relative decline of agriculture has meant a relative contraction in the bankers' best outlet for loans bearing high rates of interest.

Agricultural outlets for loans have also probably been those most affected by the rise of specialist credit institutions. These institutions—such as agricultural mortgage 'banks'—have been established specifically to meet needs that the bankers were unwilling to meet. The same applies to specialist finance firms designed to provide medium- and long-term credit for small firms. To the extent that these specialist institutions are meeting needs not met before, the banks are, of course, unaffected. But it seems probable that some of the needs they meet were previously met by the banks who would in a grudging spirit make illiquid loans rather than disoblige good customers. To the extent that this is so the banks have, of course, gained in liquidity and perhaps in avoiding bad debts—but at the expense of substantial gross profits.

The development of stock markets has probably had some influence in reducing the industrial demand for bank loans, especially at times of stock exchange boom. A boom in ordinary shares—or common stocks the Americans would say—enables companies to obtain more capital in exchange for a mere prospect of a share in future net profits. This was, of course, always so, but the public appetite for ordinary shares was almost certainly greater in the 1928-9 Wall Street boom than it had ever been before. Under these circumstances it often paid well-known firms requiring more funds temporarily to issue more shares, placing the money on time deposit (earning some interest) in the excess receipts periods. The ease with which capital could be raised in the stock market in America in the late twenties may well have accounted for much of the simultaneous growth in time deposits and for the failure of commercial loans to expand to the extent that might have been expected.

The growth of cash payments in retail trade has been one of the most important causes of the shrinkage of advances, both to retailers themselves and to wholesale traders who commonly provide some finance for the retailers. Partly because of greater regularity of employment and less extreme poverty, but partly also because the new larger-scale retailers have made cash payment a principal feature of their efficient methods of doing business, cash payments have become so much the rule over wide areas of retailing that people have forgotten how retail business used to be riddled with petty credit transactions. To some extent—and this applies particularly to the trade in durable goods—the old-fashioned chalking-up on the slate has been replaced by organized instalment credit; this the banks partly finance by lending to specialist credit companies, and in some countries directly. The banks in England have not yet shown how far they will go in providing credit through the new-fashioned channels; meanwhile the shrinkage of the old-fashioned retail credit has left them facing smaller demands from the small traders who used to be very important customers.

The net result of all these changes is that the banks in England, and in some other countries as well, are not lending directly to customers as much as they would like to do. This position, persisting over many years, has had its effect upon their organization. The selection of branch managers, the discretion given to them, the relation between branch manager and head office, the extent of reference by general managers to directors, are all substantially influenced by the fact that, while the making of an advance is an action to be carefully weighed by a sensible and experienced man, the refusal of an advance is a very serious step indeed, to be taken only with the support of quite high authority. This attitude, cultivated through twenty years of easy money conditions, made for difficulty in the restriction of advances, in obedience to government decision, in the years before government re-

restrictions on bank lending were lifted in 1955. Since that date the banks have undoubtedly taken a wider view of the kind of business they should undertake—they have, for example, embarked on direct lending to consumers purchasing durable goods—and the total of bank advances rose by almost one-third during the first twelve months. Most of them have also made substantial investments in hire-purchase finance companies; they are maintaining these companies as separate organizations, but bank advances will flow readily to the subsidiary companies. Obviously, the banks are in 1959 in venturesome mood; the old rules are being critically examined and we may well be on the verge of a transformation of English banking.

THE TECHNIQUE OF MONETARY POLICY IN ENGLAND

I. *The Objectives of Monetary Policy*

THE practices of banks, and in particular the reactions of bankers to changes in their balance-sheet positions, have now been explained sufficiently for us to look into the means by which governments may seek to influence the actions of the bankers. The broad objectives of monetary policy are set in relation to the general economic policy of the Government. In these middle decades of the twentieth century most governments regard a high and stable level of employment as the primary aim of economic policy. This is not as simple as it looks at first sight, for a high level of employment is not necessarily stable and the elimination of elements of instability is sometimes extraordinarily difficult. Moreover, the employment aspect of policy, though nowadays overriding, is not the whole story: higher levels of productivity are desired, as the surest means of attacking the problems of poverty, and the methods adopted for maintaining the volume of employment have therefore to avoid, as far as possible, hindrance of enterprise, invention, and capital accumulation upon which rising productivity depends. When all the complications are taken into account, there is great advantage in a reasonably stable level of prices as well as a high level of employment. For a country greatly dependent on foreign trade, and especially for Britain, there is also great advantage in stability in the external value (the 'foreign-exchange rate') of the national money. The level of employment, the behaviour of the general price level in the country, and the foreign-exchange value of the

money are of course all related to each other; nevertheless, in the short run their implications for monetary policy do not always coincide, and regard has to be paid to each.

The relevance of banking policy to all this is that employment, prices, and foreign-exchange rates are all influenced by the level of spending, both in total and in particular directions, and spending can be influenced by the behaviour of the banking system. As we have seen in previous chapters, the banks can affect spending both by altering the volume of money at the disposal of the people in the country and by influencing, through changes in interest rates, the willingness of people to spend today the money they have in hand or can borrow. In the British Government, the Bank of England acting in co-operation with the Treasury (the combination known as 'the authorities' or 'the monetary authorities' in current financial literature) has the responsibility of ensuring that the banking system as a whole is using its influence over spending in the right way.

In a broad way, control of the volume of money and control of rates of interest must go together, in the sense that an increase in the supply of money is necessarily associated with a falling tendency in interest rates, and vice versa. The most pressing needs are always those that have to be satisfied today—man must live through today in order to reach tomorrow—and contraction of spending power today therefore tends to raise the premium that spending power today ('money now') commands in exchange for 'money-in-the-future'. Nevertheless, a modern monetary authority can to some extent choose how much emphasis to put upon the volume of money and how much on the rate of interest, and it can influence the structure of interest rates. These differences of emphasis are likely to affect the repercussions on activity in different parts of the economy, for the availability of money to various groups of people, and their willingness to use it, will be differently

affected. Moreover, economic activity can be given further guidance by other measures ('direct controls') to check or encourage borrowing by particular groups.

In the remainder of this chapter we shall assume that the authorities are intent upon exercising certain influence upon spending (either to encourage or discourage it), and we shall consider the technical steps by which they operate upon the volume of money and on the structure of interest rates. First (in Section 2) we shall consider control of the volume of money, and in this section movements of interest rates will be considered only in so far as they are necessarily incidental to changes in the volume of money. In Section 3 we shall consider by what further measures the authorities can exert influence upon the structure of interest rates. Finally, in Section 4, we shall refer briefly to controls of the distribution of spending power otherwise than by control of bank reserves and interest rates. All three sections relate to England only; the behaviour of institutions and the technique of monetary policy in certain other countries will be briefly discussed in Chapters 10 and 11 below.

II. Control of the Volume of Bank Deposits

A bank creates a deposit—i.e. enters in its books a credit balance in favour of a customer—in return for any asset it accepts from another party, whether this asset is cash, a government security, or the promise of a customer to repay a loan. Cash includes balances accruing to it through the bankers' Clearing House, and the smaller is a single bank in relation to the Clearing Banks in total, the greater will be the proportion of its deposit-creation which is offered in return for accretions of cash as contrasted with the bank's lending operations; a full explanation of deposit-creation in a multi-bank system has therefore to take into account the genesis of clearing-house balances, and this has been done in the classic accounts of Crick and

others.¹ In accepting cash, whether directly from a member of the public or through a favourable balance at the Clearing House, a bank is passive.² (It was this passivity which used to make it difficult for bankers and others to accept the doctrine that 'banks create deposits'.) When cash comes to a bank through the Clearing House, there is usually a corresponding loss of cash by other banks, and corresponding reduction of deposits in other banks, so that no increase in the total of deposits arises.³ To this rule, however, there is an important exception: the banks as a whole may have a credit balance at the Clearing House, because the central bank has been acquiring assets—gold, foreign exchange, or securities. In this way the central bank creates cash, and the public adds to its holding of bank deposits an amount equal to the newly-created cash. The total of bank deposits can also be increased by the public's reducing its holding of cash (notes and coin); this kind of deposit creation (in which the banks are passive) is at times important, as for example in post-war Italy.

The proximate sources of increase in the total of bank deposits, referred to up to this point, may be summarized thus:

1. the public may choose to hold less cash and more bank deposits;
2. the banks may add to their earning assets, whether by the purchase of bonds or by making advances to customers;
3. the central bank may purchase securities, foreign exchange, or gold from the public.

¹ W. F. Crick, 'The Genesis of Bank Deposits', *Economica*, June 1927 (reprinted on pp. 41–53 of *Readings in Monetary Theory*, A.E.A. Series, London, 1952). Cf. J. M. Keynes, *Treatise on Money*, vol. i, pp. 23–30.

² Banks need not be entirely passive: they may (as banks in most countries do) compete actively for savings deposits. As a matter of deliberate policy, the English banks refrain from such competition with other financial institutions.

³ In this and the next two paragraphs, 'the banks' means the commercial banks to the exclusion of the central bank.

Increases in deposits originating in (2) or (3) may eventually, through their effects on the liquidity of the economy, on spending capacity and so on the level of prices and money incomes, occasion some rise in the public's cash requirements. Unless additional cash is created by the central bank to meet this need, there must be some contraction in bank deposits; this second-round change in the volume of deposits is most unlikely to be as large as the initial increase in deposits. How important this repercussion in the banking system is, and how important the first of the three changes listed above is likely to be, both depend upon the importance of notes in circulation relatively to bank deposits, and upon the stability of the public's habits in the use of notes. If the public is accustomed to holding large amounts of notes as a store of value, and if savings deposits, an alternative store of value, are important in the banking system, substantial variation in the total of bank deposits can occur independently of any initiative on the part of the banks. Such a change could occur, for example, through the shrinkage of black markets, which notoriously prefer notes; or as the result of an increase of confidence in the banks. It could even be a symptom of increasing confidence in the value of money, notes being easier than savings deposits to use in the market whenever opportunity arises to acquire more stable assets than any kind of money. Since 1945 conditions in Italy have probably been particularly propitious for variations of these kinds, and the initiative of the public has accordingly been peculiarly influential in governing the volume of bank deposits.

Even in England the public's demand for notes relatively to other forms of money has shown appreciable fluctuations. The jump in the circulation, relatively both to bank deposits and to national income, between pre-war and post-war is well known, as is the failure of the proportion to return to its old level: the change is to be associated with full employment, which has allowed workers to

establish the habit of continuous holding of comfortable cash balances. There was also a sharp relative drop in notes between 1947 and 1948, possibly to be associated with the diminution of certain black-market activities. In the years 1951-5 the notes once more gained in relative popularity.¹ All these changes have occurred without disturbance to the banking system and have been scarcely noticed by anyone except the technicians directly involved, and this unobtrusiveness has been due to the ability and willingness of the English monetary authorities to neutralize these movements as well as the big weekly and seasonal movements in the public's desire to hold notes and coin. The technique required for neutralization has already been explained in Chapter 5, and in the remainder of this chapter we shall ignore movements having this kind of origin.

In current English circumstances, the volume of deposits depends upon the actions and reactions of four parties:

1. The Bank of England acting in conjunction with the Treasury and various government 'funds'; these, following current English usage, I shall refer to as 'the authorities'.
2. The London Clearing Banks; these I refer to as 'the banks'.

¹ I am indebted to Professor H. Johnson for the following figures:

NOTES AND COINS IN CIRCULATION

(including bank holdings)

<i>Year</i>	<i>£m.</i>	<i>% of True Bank Cash</i>	<i>% of Net Deposits</i>	<i>% of net Current Accounts</i>
1938	442	198	19.7	37.3
1945	1,263	346	27.8	42.4
1947	1,361	296	25.0	38.9
1948	1,239	262	21.7	33.9
1951	1,291	261	21.8	33.4
1955	1,640	320	26.4	42.7
(First 8 months)				

3. The Discount Houses.

4. The public, including banks outside the clearing ('the outside banks') and all other financial institutions.¹

The assets and liabilities of these four parties have, for this purpose, to be classified into:

(a) Cash.

(b) Treasury Bills and government bonds short enough to be held by the discount houses.

(c) Call Loans by the banks to the discount houses.

(d) Government bonds held by the banks in their investment portfolios, but too long to be held by the discount houses (five years is the present dividing line).

(e) Bank Deposits.

(f) Bank Advances.

(g) All other assets.

(a) Cash is a creation of the authorities, and is held by the banks (the 8 per cent. 'reserve' against deposits), and by the public, but not by the discount houses.

(b) Treasury Bills and other money-market assets are held not only by the discount houses, but also by the banks and by the public. Assets in this class are created by the authorities; by selling them to other parties, the authorities destroy cash, and vice versa.

(c) Only the banks (as creditors) and the discount houses (as debtors) are directly concerned with Call Money.

(d) Bonds having more than five years to run to redemption are not held by the discount houses (with an unimportant qualification); their distribution between banks and the public is variable, though the banks have inhibitions affecting their dealings in these securities,

¹ These outside banks include the Scottish banks. In view of the differences between these banks and the London Clearing Banks, Scotland is for our present purpose to be regarded as separate from England (in which I include Wales); Scotland is in fact an inner Sterling Area country.

particularly those which are long-dated. The authorities both buy and sell, creating or destroying cash as they do so.

(e) Bank deposits (liabilities of the banks and assets of the public) are not held significantly either by the authorities or by the Discount Houses.

(f) Advances by the banks to their customers are assets of the banks, liabilities of the public.

(g) All other assets include all other forms of wealth, including securities (other than those classed under (b) and (c) above), real estate, goods, &c.

In tabular form we may summarize as follows (L standing for Liability, A for Asset):

	<i>Authorities</i>	<i>Banks</i>	<i>Discount Houses</i>	<i>The Public</i>
Cash	L	A	..	A
Bills and short bonds .	L	A	A	A
Call Money . . . . .	..	A	L	..
Medium and long bonds.	L	A	..	A
Bank Deposits . . . . .	..	L	..	A
Bank Advances . . . . .	..	A	..	L

'All other assets', (g) above, are excluded from this table as, with unimportant exceptions, the three monetary bodies (Authorities, Banks, and Discount Houses) are not involved.

Certain minor complications have been ignored:

1. The Bank of England has some private customers, and therefore has deposit liabilities to the public and makes advances to the public.

2. The banks hold a small proportion of bonds (e.g. public utility bonds) other than their U.K. government bonds, among their 'Investments'.

3. The banks and the discount houses, as well as outside banks included in 'The Public', hold small amounts of ordinary bills of exchange.

4. The Discount Houses draw some Call Money from

outside banks and other financial institutions here included in 'The Public'. This 'outside money' may amount to as much as one-half of their total call money, and its movements are important to the discount market though not to our present purpose.

5. Some call money may go to stock jobbers, who are included in 'The Public'.

The 'outside banks'—i.e. those not members of the London Bankers' Clearing House—also have some deposit liabilities to the public and make advances; nevertheless they are not, in the following analysis, treated as banks, but are included along with other financial institutions in 'The Public'. This does not mean that their behaviour has no monetary significance; on the contrary, like other financial institutions and like individuals they may affect the situation by changing the liquidity distribution of their assets. They are excluded from the category 'the banks' because the London Clearing Banks alone follow the fairly rigid liquidity rules described below, and the weight of these domestic banks, operating according to these rules, renders them predominant in the determination of the volume of banks deposits which is perhaps the most important single factor operating on the liquidity situation of the economy.

Subject to the qualifications referred to in Section II above,¹ the volume of deposits depends upon the action of the banks in acquiring (or disposing of) earning assets. The assets that can ordinarily be depended upon to yield additional income at the highest rates are advances to customers and government bonds; among the latter, the long-term and medium-term bonds must normally be regarded as the most dependable earners.² Provided that

¹ I refer to the authorities' operations in securities as well as shifts in public preferences between cash and deposits.

² Short-term rates can be, and sometimes are, higher than yields on long-term securities, but in ordinary circumstances this can occur only when there is expectation that short-term rates are going to fall. Even in this case the long bond is likely to be preferred as an income-earner, the

attractive opportunities to add to the total of these assets exist, the banks will in fact add to them—and so to the volume of deposits—whenever they feel able to reduce the proportion of their more liquid assets. This gives us four relevant factors:

1. the banks' opportunities to lend to customers;
2. the banks' view of the bond market;
3. the conventions about liquidity ratios; and
4. the supply of liquid assets for the banks.

Until 1951, and only in less degree until 1955, the banks had for a long time been so glutted with liquidity that they felt under no compulsion, other than the qualitative control imposed by official requests, to refuse to lend to good banking borrowers. In the early post-war years, indeed, the pressure of liquidity was so strong that the banks tended to broaden their notions of what constituted a good banking borrower, and they also tended—at least between each of the various reiterations by successive Chancellors—to broaden their interpretation of what lending was conformable with government requests. Under these conditions, the total of Bank Advances was essentially demand-determined, subject to an underlying tendency, originating on the supply side, to grow as the years went by. Bank Advances grew, that is to say, both because the highly liquid banks welcomed with open arms the increasing demand and because, in their anxiety to lend more, they broadened their views about what was eligible business. Even when liquidity considerations early in 1955 checked the growth of Advances-plus-Investments, the banks still wished, for profit and goodwill reasons,¹ to continue to meet the expanding demand for Advances. Their wish to

short being preferred only if the bank wishes to maintain its liquidity. Theoretically long-term assets could be so scarce in relation to investors' preferences that the long-term rates could be forced below the short rates.

¹ Advances normally yield appreciably higher interest rates than do government securities, and the banker's willingness to lend to his customers is a very important element in the goodwill that maintains the volume of his business generally.

do this was so strong that they were willing to sell securities in order to meet the rising demand for Advances, and they might well have continued to follow this course, even at the price of forcing bond prices down against themselves, if the authorities had not in July stepped in with their *fiat* restricting Advances. Restriction of Advances, at government request, continued until mid-1958; since that date the banks have expanded their advances very greatly and have sold bonds in order to maintain their liquidity ratios.

During the years of excess liquidity, while the banks were disposed to increase their Advances whenever reasonable opportunity offered, their attitude towards their holdings of government bonds was somewhat different. The income that could be drawn from these securities was attractive, though appreciably lower than that on Advances. On the other hand, owing mainly to certain accounting conventions, the banks were fearful of capital depreciation if, as seemed likely, rates of interest rose appreciably within the lifetimes of the bonds. Given these conflicting considerations, the tendency of English bankers after the failure (1947) of the Dalton experiment,¹ and while their liquidity continued to be abnormally high, was to hold their investment portfolios more or less stationary in absolute amount. They did tend to shorten somewhat the average life and, contrary to earlier traditions, to divest themselves entirely of undated stocks; these changes were, however, changes in the composition rather than in the size of portfolios. In these circumstances the attitude towards bonds was a factor tending to hold the aggregate of deposits where it was, and the only important factor making for change in this aggregate was the growing demand for bank advances.² In the autumn of 1951 the

¹ Cf. pp. 144-5 above.

² During part of this period (1947-51), the authorities somewhat reduced the supply of Treasury Bills. This movement was not large enough to remove all the surplus liquidity of the banks, and was therefore not a restraining factor, but it did mean that total deposits rose rather less than total advances rose.

banks were submitted to a forced funding operation: this simultaneously jerked their investment totals up and eliminated most of the remaining excess of liquid assets. The accompanying changes in monetary policy forced long-term rates of interest up, but forced the short rates (including the rates on bank advances) to rise even more, so that the relative attractions of bonds as bankers' assets were greatly reduced. In these circumstances the bankers were shaken out of their unwillingness to change their investment totals, and notably in the first half of 1955 considered the bond portfolios much more readily compressible than the total of advances.

The power of the authorities to induce the banks to change their attitude towards investments and advances depends upon the banks' regard for their own liquidity. This has already been briefly discussed on pp. 158-64 above; we must now consider further the two liquidity ratios—the cash ratio and the liquid-assets ratio—which are particularly watched by the banks.

Since 1946 the cash ratio has been held, on a weekly basis and avowedly without window-dressing, at 8 per cent. The other ratio, the liquid-assets ratio, became a matter of official guidance only in 1955. It remains less rigid, in the sense that a considerable seasonal variation is tolerated,¹ and the level appropriate to any particular season is not put at a precise figure parallel to the 8 per cent. for the cash ratio. The position is broadly that the seasonal minimum (in the first quarter of the calendar year)² must not fall below about 30 per cent.: hence common reference to it as 'the 30 per cent. ratio'. In current conditions this 30 per cent. rule rather than the conven-

¹ The seasonal variation in the liquid-assets ratio is akin to the tolerated daily variation in the cash ratio; the latter variation does not appear in the published statistics because the monthly statements refer always to Wednesdays.

² This well-known seasonal movement is due to heavy collection of taxes during January, February, and March of each year.

tional cash ratio appears as the limiting factor in the creation of bank deposits.

The cash ratio has lost its former sharpness as a controller of the supply of money because for many years now the Bank of England has more or less automatically kept the market supplied with just that amount of cash required to maintain the banks' cash ratios at 8 per cent. of their deposits, and both banks and discount houses have become less sensitive to the appearance of a shortage of cash. The cash-creating function of the Bank of England has lost something of the purely mechanical quality it had from 1940 to 1951; but it has not gone back to the traditional practice of gold-standard days. Cash is required for the public and for bank reserves; none is held by the discount houses, but these form the channel through which the banks keep themselves supplied with sufficient cash to maintain their reserves at the agreed 8 per cent. of deposits. The Bank of England always provides just enough cash, one way or another, to allow the discount houses to balance their books (i.e. to have zero cash after borrowing all they can from the banks). And everybody knows that, because the banks must have the cash, it will be forthcoming. No sense of strain in the cash position develops to the point of directly provoking a restriction of credit.

In gold-standard days of long ago, the system was different in several respects. The banks' cash ratios were compressible (especially with the help of window-dressing)¹ so that a decline in cash relatively to deposits did not immediately bring into operation the lender of last resort. On the other hand, pressure severe enough to force resort to the lender of last resort was viewed much more seriously, partly because it was evidence of extreme shortage and partly because the behaviour of the lender of last resort

¹ Other factors responsible for the compressibility of the cash ratio were the absence of any officially agreed view and the greater weight of outside banks in the market.

was known to depend on the state of its gold reserve. And when the market took a serious view of the situation, it had one method of restricting credit in its own hands: it would reduce the amount of bills of exchange it was willing to discount (bills of exchange, drawn by traders for financing trade in goods, were then a large proportion of the bill market's portfolios). The banks—at least those in the City of London—would also be scared into measures of restraint. This is a highly simplified picture, and it is a long time since conditions were at all close to this; but it will be apparent that in such conditions the cash base was a very important factor in direct regulation of the state of credit. Gradually conditions have changed, in more ways than one,¹ and in the years 1940–51 resort to the Bank of England became so completely innocuous for everybody that shortage of cash ceased to have any power directly to influence the state of credit.

The position in 1959 is that the cash ratio is virtually incompressible and variations in the cash supply are continuous, so that the Bank of England is constantly having to operate. But whereas in 1940–51 the Bank of England operated only 'at market rates' through its operator in the market ('the back door') it now reserves the right to, and frequently does, close the back door, so forcing the discount houses to borrow at Bank Rate, in its Discount Office ('the front door'). By the extent to which it forces the discount houses to come to the front door, the Bank influences the level of market rate in relation to Bank Rate; thus by fixing Bank Rate and by its market operations the Bank virtually fixes the level of market rates.² If it wants market rate to rise, it relieves the market less frequently through the back door so that the penalty Bank

¹ The great decline in the use of bills of exchange is an important part of the story.

² The Bank can, of course, ease the process of getting market rate to the level it desires, by giving some indication to the discount houses. It is understood that in present circumstances the Bank does not actually tell the market what it thinks the rate should be.

Rate is more frequently imposed¹ and if necessary the Bank raises Bank Rate itself. In these conditions the Bank of England remains, as in 1940-51, passive in deciding the amount of cash: the cash is simply fitted to the total of bank deposits coupled with the requirements of the public for circulation. The Bank does, however, in effect fix the terms on which just the required amount of cash gets into the market. The consequent behaviour of the market rate for Treasury Bills influences the attitude of the banks and the public towards bonds.² A tendency of market rate to rise is likely to encourage a bearish attitude all round. If this results in a fall of bond prices without any redistribution of holdings, there is no effect on the volume of bank deposits. If, on the other hand, the banks reduce their portfolios by sales to the public, deposits are reduced by that amount,³ and there will be a release of cash (equal to

¹ It is perhaps necessary to add that the Bank of England's task in estimating the market's position (a necessary preliminary to the step of forcing its view on the market) is by no means easy. Besides internal movements of cash, which can be quite erratic, international movements of funds into and out of London can obscure the situation of the market.

² These terms can theoretically influence the size of the portfolio (bills *plus* bonds) held by the discount house. This influence is not important at present, because the discount houses, making a running profit on bills, hold as large a total as they can finance, while they are unwilling to add to their bonds (from fear of future losses) and cannot afford to accept the realization of present book losses by selling bonds; the size of their portfolios is, moreover, limited by relation to their own capital resources, on a scale sanctioned by the Bank of England. In the old conditions, a movement of rates (and particularly resort to borrowing at the Bank of England's penalty rate) could have big effects on the discount houses' portfolios, which then consisted of commercial rather than government paper.

³ The repercussion of the assumed fall in bond prices on the markets for bonds and shares is likely to be more complex, and the effects upon the volume of deposits also more complex, than is assumed in the above paragraph. There I have assumed that the bonds sold by the banks are purchased by the public in exchange for deposits; but the fall in stock-exchange prices is likely also to cause firms who were about to make issues of share or loan capital to defer their issues, financing themselves meanwhile by prolongation of their borrowings from the banks. To the extent that this happens (and there are other possible variants) the banks will in effect have exchanged bonds for advances, among their assets, and

8 per cent. of the fall in deposits) by the banks to the discount market, which the Bank of England must mop up if the market rate of discount is to be held at its new level. The borrowing public may also be affected by a change in market rates of interest—both bill rates and rates charged on bank advances ('overdraft rates'); to the small extent that this occurs, rates further influence the total of deposits.

Thus the amount of cash created by the Bank of England is a passive element in the situation, though the terms on which it is made available can have repercussions on the volume of bank deposits. The system works not by a volume of bank deposits and of cash being determined as desirable, but rather by the authorities' choosing a structure of interest rates and making the cash fit that structure.¹ It is because they prefer reasonable stability in very short rates of interest that they have to allow the cash basis to vary in adjustment to temporary variations in market conditions. Their power over the cash position is of course the sanction that makes the enforcement of a given structure of interest rates possible: in this sense the traditional analysis is as sound as ever.

Because it is always held at or very close to 8 per cent., the cash ratio goes virtually ignored in most current discussions of the banking position. The liquid-assets ratio appears now to be regarded not as the secondary but as the primary liquidity ratio; it is by forcing this ratio down toward the critical 30 per cent. figure that the authorities have lately forced the banks to reduce their total of investments and advances. The next stage of our analysis must

the deposits will not fall; only when the firms succeed in making their issues and repaying their bank advances will deposits fall.

¹ This is not one of the eternal verities. There is nothing but their own choice to prevent the authorities from working things the other way round: i.e. they could choose the cash base and total of deposits and allow interest rates to fit themselves to those quantities. In so far as the authorities are now fixing the total of Advances, they are limiting their freedom to influence the structure of interest rates.

therefore reveal what circumstances tend to raise or depress the volume of liquid assets held by the banks; since the banks can always turn bills or Call Money into cash, or vice versa, it is their total of bills and Call Money that we have to regard as the crucial factor. (The distribution of the total between bills and Call Money is irrelevant for our purposes: Call Money simply represents bills held at one remove.)

If the liquid assets of the banks are to be reduced, there must be either:

(1) absorption of Treasury Bills and/or short bonds by the public, in replacement either of matured bills formerly held by the banks, or of bills or bonds held by the discount market; or

(2) use by the authorities of receipts from the public to pay off Treasury Bills and/or short bonds.

Each of these courses involves reduction of bank deposits and the banks' liquid assets by equal absolute amounts, implying a reduction of the ratio liquid-assets/bank-deposits.

To induce (1)—the absorption of short government paper by the public—the authorities can force up the market rate of discount on Treasury Bills and the yields on short bonds by forcing the market into the Bank more frequently or by other hints to the market. The relationship of these short interest rates to the bankers' deposit rate is the relevant factor here. Until 1954 the deposit rate was little below the other short rates, and shifts from time deposits to bills and bonds were unimportant; since 1954 the bill and bond rates have been seriously competitive with the deposit rate for temporarily idle funds of large corporations. This mechanism hinges, it should be noted, upon the bankers' current agreement upon a single deposit rate that is, for good reason, substantially below Bank Rate.¹

¹ The rate at which the discount houses will discount good bills of exchange must ordinarily be below Bank Rate; this sets a limit to the

For method (2) above—net redemption of 'Treasury Bills and/or short bonds by the authorities—the authorities must in some way obtain disposal of deposits owned by the public. They can achieve this by running a surplus on current account (taxation exceeding government expenditure), or by depleting gold or foreign-exchange reserves, or by selling long bonds to the public. The first and second of these normally occur as the result of other government policies—current policies on taxation and expenditure, and the exchange rate—decisions on which will normally be taken without regard to short-run effects upon the money-market. The third course—the 'funding' of National Debt—can also be followed for reasons independent of short-run money-market effects, but in the nineteen-fifties the tendency has been to fund debt primarily for the purpose of reducing the liquidity of the economy.

When deposits are in any of these ways put into the hands of the authorities, the banks find their total of liquid assets depleted by the same amount as their total deposit liabilities are reduced. Initially this fall in liquid assets occurs through a transfer from 'Bankers' Deposits' to 'Public Deposits' (i.e. government balances) at the Bank of England; but banks immediately redress the extraordinary scarcity of cash by operations in the discount market, whereby the banks restore their 8 per cent. cash ratio. They do so, however, at the expense of their proportions of bills and Call Money: the fall in the total of liquid assets of the banks remains equal in absolute amount to the fall in their deposit liabilities to the public. The liquid-assets ratio is thus reduced.

When, by the operation of any of these factors, the banks find their liquid-assets ratio reduced to a level regarded as uncomfortably low, having regard to the season of the year, they have to take steps to redress the position by

extent to which bank-overdraft rates can be above Bank Rate; and the banks must, in order to make their living, have a sufficient margin between their deposit rate and their overdraft rates.

reducing their investments and/or their advances. These operations themselves reduce the volume of deposits. The upshot of the efforts by the authorities is therefore a multiple reduction of deposits: the reduction which occurs as the authorities absorb deposits in exchange for taxation liabilities, foreign exchange, or bonds, and the secondary reduction due to the banks' reactions to the decline in their liquid-assets ratio. If at the outset the ratio was already at 30 per cent., and the banks re-establish that ratio, the total fall in deposits must (ignoring certain minor repercussions) equal ten-thirds of the initial government surplus, depletion of exchange reserves, or sale of bonds to the public.

✓ To summarize, we may list the factors most directly relevant to the determination of the volume of bank deposits:

1. The level of prices and the volume of business activity.
2. The public's inclination to hold cash.
3. The public's inclination to use bank advances.
4. The banks' willingness to make advances (in the sense of the standards they require of borrowers).
5. The banks' willingness to hold bonds.
6. The banks' ideas about the proper ratio of liquid assets to deposits.
7. The banks' ideas about their cash ratios.
8. The public's willingness to hold bills and bonds.
9. The Government's budgetary position.
10. The Government's foreign-exchange policy and the resultant changes in exchange reserves.
11. The inclination of the authorities to fund or unfund debt (strictly, to lengthen or shorten the average life of outstanding dated securities).
12. The authorities' willingness to create cash, and the price at which they make the marginal requirements of cash available.

Of these factors, 9, 10, 11, and 12 are all matters of direct decision by the authorities, though 9 and 10 normally, and 11 sometimes, are settled by reference to circumstances other than effects upon the monetary situation. It is within the power of the authorities to act directly on 4, as they have done ever since the war, and especially in 1955-7; it is also within their power to act directly on 5, as they did in 1951 and 1952. They can also decide 7, as they have done since 1945, and 6, as they have done since 1955.

This leaves 1, 2, 3, and 8 as the factors upon which the authorities cannot operate directly: but all these, and sometimes 5 and even 4 as well, are subject to influence by the structure of interest rates, which the authorities can influence in a number of ways, especially by their decisions on 11 (debt-funding) and 12 (Bank Rate and discount-market policy). To influence is not to determine, and the authorities have to accept a certain independence in the determination of prices, economic activity, public demand for liquidity, and so on; the options open to the authorities are limited by such conditions. The authorities may choose the general level of interest rates, and the structure of rates, and the more effective is their control over financial institutions, the wider is their range of options, particularly in choosing a structure of interest rates. But in making these choices they are depriving themselves of the choice of the level of deposits and the maturity-distribution of the government debt. Alternatively, they may choose the level of deposits and the maturity-distribution of government debt and leave interest rates to take care of themselves.

III. *The Structure of Interest Rates*

A decision of the authorities to act primarily upon the volume of deposits is most appropriate when a sudden change is required in the pressure of spending by the public, whether this change is in the direction of contrac-

tion (i.e. deflationary) or in the direction of expansion (i.e. inflationary). If a reduction in spending is required, the authorities can ensure that the total of money balances is reduced, and so reduce the disposition of the public (whether as consumers or as business firms) to spend; and the same steps will tend to reduce the availability of bank advances, so that intended spending with the help of borrowed money is also checked. Correspondingly, at a time of business depression, the quickest method whereby the monetary authorities can stimulate spending is the flooding of the system with additional money, both by inducing people and firms to hold bigger balances and by making it easier for people to borrow from the banks and other financial institutions.

Operations directed in this way towards changing the pressure of spending necessitate some movement of interest rates: flooding the market with money implies some downward pressure on interest rates, and making money tighter similarly implies making money dearer. People are induced to hold bigger balances (the bigger supply of money that will eventually tempt them into bigger spending) if the holding of interest-bearing securities loses some of its attraction; and a fall in interest rates makes financial institutions (particularly banks) feel more liquid and therefore more disposed to lend. Correspondingly, the supply of money is forced down by making the holding of interest-bearing securities more attractive, and the rise in interest rates makes the financial institutions more cautious in their lending. Even, therefore, if the authorities have little faith in 'the interest-rate weapon' (as discussed in Chapter 7 above), or for some reason wish to avoid substantial movements in interest rates, an effective policy of inflating or deflating the money-supply (or 'credit') is bound to involve some disturbance of some interest rates. This association of interest movements with inflationary or deflationary policies¹ is so well known as an historical

¹ The words 'inflationary' and 'deflationary' are used in the senses of

phenomenon that governments are inclined to precipitate and to accentuate the movement of interest rates in order to show their determination to press their policy.

Or the authorities may want to go farther. Despite the doubts expressed in Chapter 7, it may be thought desirable to alter the level of interest rates: to move the whole structure of interest rates beyond anything necessarily and immediately related to a desired change in the supply of credit. In Chapter 7 we have seen how, sluggish though it is in affecting the pressure of capital development, the rate of interest does eventually bear quite heavily upon the willingness of the community to push real resources into the construction of long-lived equipment.¹ The authorities may consider that the long-term situation calls for a shift in interest rates, because they fear either an undue fall in capital development (and so a chronic tendency to 'stagnation') or a persistent tendency for capital development to be attempted on an excessive scale (and so a chronic tendency to inflation). In such circumstances they may have a positive 'rate of interest policy', in the former case deeming it necessary to lower interest rates, and in the latter to raise them. An example of the former was Dr. Dalton's extreme cheap-money policy in 1945-7 (though other motives were also operating); considerations of the latter kind encouraged the authorities in holding interest rates up in 1958-9. The purpose of the following paragraphs is to show how the authorities may attempt to engineer movements in interest rates, when their purpose goes beyond an immediate tightening or easing of the credit position.

'promoting an expansion (contraction) in spending'. As modern governments try to keep economic activity reasonably steady, it would perhaps be fairer to use the less elegant words 'reflationary' (expanding to offset some other contractionist force) and 'disinflationary' (contracting to offset some other expansionist force).

¹ Including major capital works such as railways and ports, every kind of industrial building and equipment, houses and 'durable consumer goods'.

The Dalton policy, in 1945-7, followed the war period throughout which the Treasury Bill rate had been pegged at about 1 per cent. (this had been achieved by the willingness of the Bank of England to operate at its back door, on either side of the market) and other rates on government securities had by various means been held within a range rising to about 3 per cent. for long-term bonds. At the end of the war the new government accepted the view that, partly because an early post-war slump was feared, low interest rates should be continued. The objective of the Chancellor of the Exchequer (Mr. Dalton) in the autumn of 1945 was to go farther than this, and to get the long-term rate down to $2\frac{1}{2}$ per cent. or even lower. For this purpose he used the war-time device of holding the shortest rates down, and hoped that the normal tug of short-term rates on long-term rates would bring the latter down. But how far the tug operates—through the willingness of people and financial institutions to switch from one part of the capital market to another—depends very much on what people expect to happen to interest rates in the future. Expectation of a rise in interest rates—i.e. a fall in security prices—is likely in general to be more widespread the lower interest rates already stand (the higher security prices already stand). An implication of this is that the authorities can only push interest rates downwards by buying a number of security holdings which increases very rapidly as the authorities bid the security prices up higher and higher. The only chance of escaping the compulsion to support an ultra-cheap-money policy by heavy purchases of medium- and long-term securities lies in a revision of expectations—the spread of a belief that interest rates are going to settle down at a level lower than that hitherto expected.

To induce a revision of public expectations, in the desired direction, the Chancellor took every opportunity to propound his view that interest rates should come down and that he was going to be successful in his attempt to get them down. His words were reinforced by the an-

nouncement of reduced rates on Treasury Bills and on Treasury Deposit Receipts. The impact of these words and deeds on public expectations was certainly in the direction desired by Mr. Dalton, about one-quarter of 1 per cent. being knocked off the yield of Consols in about six months. But the second quarter of 1 per cent.—between $2\frac{3}{4}$ and $2\frac{1}{2}$ per cent.—proved a much tougher proposition and the Treasury found it necessary to bring into action their second method of attack, the big battalions of the resources of the 'Public Departments'. As explained above, given the state of expectations, the market rate can be revised by the absorption by the authorities of securities unloaded by the more sceptical holders. This line of attack was now adopted, not as a permanent arrangement but as a temporary expedient that would hasten the general revision of expectations which Mr. Dalton, by smooth words and by rough words, was seeking to effect.

The resources brought into play were those of the 'Public Departments'. Among these are the funds of the Post Office Savings Bank, the trustee savings banks, and the great social insurance funds, all of which are entrusted to a body called 'The Commissioners for the Reduction of the National Debt'. These National Debt Commissioners, as they are commonly called, are a separate body established by Parliament for another purpose very many years ago; but they include the Chancellor of the Exchequer and the Governor and Deputy Governor of the Bank of England, and their policy in distributing their resources between different British Government securities can be trimmed to suit the exigencies of Treasury operations. The most important of the 'Public Departments' is, however, the (accounting) Issue Department of the Bank of England; in the nineteen-fifties it has been primarily by varying the securities held in the Issue Department that the authorities have operated on the gilt-edged market. Altogether these funds by 1945 totalled thousands of millions, and constituted a formidable *masse*

de manœuvre. The authorities could, to the extent that Treasury Bills were held, unload the Treasury Bills on to the banks, using the ordinary bank deposits received in payment to take up medium-term and long-term securities previously held by the public. Thus the buying pressure desired by the authorities to push up market prices of medium- and long-term securities (i.e. push down the rates of interest) could be manufactured.

It is important to appreciate that this manœuvre was possible only if the banks played their part, which was to absorb the Treasury Bills unloaded by the Public Departments. They had an incentive to do this as long as they could obtain more cash for reserve, since they would receive interest on the additional Treasury Bills held. Under the 'ever-open-back-door' system then operating, the Bank of England would in fact provide them with as much cash as they required to enable them (consistently with maintaining their 8 per cent. cash ratio) to hold all the Treasury Bills offered. Indeed, the back door was held open on the understanding that the banks would see to it that the Treasury Bills were absorbed.¹

The process was thus thoroughly reliable, as far as the creation of the buying pressure for medium- and long-term securities was concerned. (The efficacy of this buying pressure in causing a fall in interest rates is another part of the story, to which we shall return presently.) It depended upon (1) the willingness and ability of the authorities to lengthen the average life of securities held by the Public Departments, &c.; (2) the willingness of the banks to expand their Treasury Bill holdings provided they were allowed more cash; and (3) the willingness of the Bank of England to create more cash for the banks without raising the short-term money rates.

¹ In the Dalton episode, the authorities derived further power from the existence of 'Treasury Deposit Receipts', wartime instruments which were in effect unmarketable Treasury Bills which the banks were compelled to buy and hold.

The process will perhaps be more readily understood if it is set out in balance-sheet terms on the same schematic plan as has been used in this book. In the following paragraphs and tables, the figures used are not quite the actual figures of the 1945-7 episode, but are simplified figures, based on the real ones and not so very different from them. The use of imaginary figures is designed partly to ease the reader's arithmetic, but partly also to avoid the complications due to (a) the former practice of 'window-dressing' the banks' cash ratios, and (b) the simultaneous operation of other factors such as the rise in the demand for ordinary bank advances. (We have no precise information of the changes in securities held by the Public Departments.) The following figures must be regarded as imaginary though not very far from being a picture of what actually happened during the fifteen months November 1945 to February 1947.

POSITION I

(£ millions)

Bank of England

Note and Deposit Liabilities to Commercial Banks	400	Government Securities	500
Public Deposits	100		
	<u>500</u>		<u>500</u>

Commercial Banks

Deposits	5,000	Cash in hand and at the Bank of England	400
		Money at Call, Treasury Bills, and T.D.R.'s	2,200
		Other Assets	2,400
	<u>5,000</u>		<u>5,000</u>

Public Departments

Treasury Bills	2,000
Medium- and Long-term Securities	2,000
	<u>4,000</u>

Then we will suppose that the Public Departments buy medium- and long-term government securities to the

amount of £500 millions, and that the banks are expected to take up the Treasury Bills sold by the Public Departments. The public have to be paid by drafts on Public Deposits at the Bank of England, and these Public Deposits are replenished by the sale of Treasury Bills to the commercial banks. Then we may imagine, as an immediate impact result of the transactions of the Public Departments:

POSITION II

(£ millions)

Bank of England

Note and Deposit Liabilities to Banks:	Government Securities	500
$400 + 500(a) - 500(b) =$	400	
Public Deposits:		
$100 - 500(a) + 500(b) =$	100	
	<u>500</u>	<u>500</u>

Commercial Banks

Deposits:	Cash, &c.:	
$5,000 + 500(a) =$	$400 + 500(a) - 500(b) =$	400
5,500	Money at Call, T. Bills, and T.D.R.'s:	
	$2,200 + 500(b) =$	2,700
	Other Assets	2,400
	<u>5,500</u>	<u>5,500</u>

Public Departments

Treasury Bills: $2,000 - 500(b)$	1,500
Medium- and Long-term Securities: $2,000 + 500(a)$	2,500
	<u>4,000</u>

Notes

1. Changes marked (a) arise as Public Departments buy from the public securities to amount £500m., paying by cheque on Public Deposits at the Bank of England; the cheques are credited by the banks to their customers, and used to increase their own balances at the Bank of England.

2. Changes marked (b) arise as the Public Departments sell Treasury Bills to the commercial banks, which pay for them by cheque on their balances at the Bank of England, these cheques being credited by the Bank of England to Public Accounts.

3. The cash ratio of the commercial banks in Position II is about 7½ per cent.

The commercial banks now have to rebuild their cash ratio to 8 per cent. They can do this by unloading on to the Bank of England part of their very large holding of Treasury Bills, either directly or by calling loans from the discount houses who in turn have to unload Treasury Bills on to the Bank of England, through the ever-open back door. In either case we can summarize the resulting position thus:

POSITION III

(£ millions)

Bank of England

Note and Deposit Liabilities:		Government Securities:	
$400 + 40(c) =$	440	$500 + 40(d) =$	540
Public Deposits . . .	100		
	<u>540</u>		<u>540</u>

Commercial Banks

Deposits	5,500	Cash, &c.:	
		$400 + 40(c) =$	440
		Money at Call, T. Bills, and	
		T.D.R.'s:	
		$2,700 - 40(d) =$	2,660
		Other Assets	2,400
	<u>5,500</u>		<u>5,500</u>

Public Departments

(as in Position II)

Notes on figures in Position III

(c) Denotes a change due to payment by the Bank of England to the commercial banks for Treasury Bills passed into the former through the open back door.

(d) Denotes transfer of Treasury Bills from the commercial banks (or discount houses who thereby are enabled to pay off Money at Call) to the Bank of England.

Thus in effect the £500 millions of Treasury Bills unloaded by the Public Departments has been taken up as to £460 millions by the commercial banks and as to £40 millions by the Bank of England—this proportion of 92 to 8 reflecting the commercial banks' requirement to

hold 8 per cent. in cash and 92 per cent. in earning assets against the additional £500 millions of bank deposits acquired by the general public as the latter unloads its securities on to the Public Departments.

Fundamentally the depression in interest rates is dependent on the willingness of the banking system to create additional money, and this (given the 8 per cent. cash ratio) implies willingness of the Bank of England to create additional cash. But as the increased supply of liquidity (money) by the banks is, in accordance with their principle of preferring short assets, made only against short assets (additional Treasury Bills), the pressure of the increased liquidity upon long interest rates can become effective only by the intervention of some body willing to transmute the short loans offered by the banks into a pressure of long term loans, so relieving the public's desire to unload long-term securities as their yields fall. As rates of interest fall, the public (being sceptical of continuance of the fall) 'go short'—they exchange securities for cash. Someone must 'go long' in order to absorb the securities offered. The banks will create more money, but they are not willing to 'go long' enough. The Public Departments step into the breach, and 'go longer' in the composition of their own portfolios, replacing Treasury Bill holdings by medium-term and long-term securities.

A closer study of Positions I and III above will reveal that the operation results in a higher percentage of money-market assets among the total assets of the commercial banks, for the entire increase in assets is in cash and money-market assets. As Treasury Bills were, at this time, exchangeable for cash on demand at the Bank of England's ever-open back door, this rise in Treasury Bills would not be resisted by the banks on account of any loss of liquidity. On the other hand, they might think that a small proportion of their increase in resources could safely be invested in long-term securities. To the extent that they did this, the complicated process just described

could be short-circuited; the action of the banks in taking the long-term securities offered by the public would reduce the extent to which the Public Departments had to re-distribute their resources between Treasury Bills and longer-dated bonds. We might, for instance, arrive at an alternative position, which we shall call IIIA:

POSITION IIIA

(£ millions)

Bank of England

Note and Deposit Liabilities	440	Government Securities	540
Public Deposits	100		
	<u>540</u>		<u>540</u>

Commercial Banks

Deposits	5,500	Cash, &c.	440
		Money at Call, T. Bills, and T.D.R.'s	2,560
		Other Assets (including long-term Government Securities)	2,500
	<u>5,500</u>		<u>5,500</u>

Public Departments

Treasury Bills	1,600
Medium- and Long-term Securities	<u>2,400</u>
	<u>4,000</u>

Here, because £100 millions of the securities on offer by the public (at the prices bid by Public Departments) are taken up by the commercial banks, only £400 millions of Treasury Bills have to be replaced in the Public Departments by securities bought from the public. These £400 millions are taken up as to £360 millions by the commercial banks and £40 millions by the Bank of England—the £40 millions being (as in the other case also) the amount of additional cash necessary as a basis for the £500 millions addition to the total of bank deposits.

It might be supposed that the commercial banks, pursuing their ordinary liquidity rules, would in fact be

prepared, in the way we have just seen, to add somewhat to their holdings of medium-term and long-term securities as their cash and money-market assets expand. On the other hand, the commercial bankers might be infected by the general investing public's scepticism about the future of the rate of interest. If the banks, like the public, think that the prices of government securities are going to fall, they are unlikely to add to their own holdings. They, like the public, will be inclined to 'go short'—i.e. to increase the average liquidity of their asset portfolios. This is the case we have shown in Position III above, where the amounts of cash reserves and money-market assets are increased while other (longer) assets are maintained at the same absolute amounts as in Position I. The banks may indeed go farther in this direction, and themselves unload the longer securities on to the Public Departments, taking up more Treasury Bills in exchange. This, though it increases the necessary lengthening of the Public Departments' assets, does not require further enlargement of the cash basis. This peculiarity arises from the fact that the desire of the commercial banks for greater liquidity is satisfied by the enlargement of their holdings of Treasury Bills, whereas we have supposed that the public's desire for greater liquidity could be satisfied only by additional bank deposits. If the public would be content to hold Treasury Bills, a mere exchange in the portfolio of the Public Departments of long securities for Treasury Bills would meet the case, without any creation of bank deposits.¹

In general we may say that the public's pressure to hold shorter assets as rates of interest fall must be matched by a corresponding lengthening of the assets held somewhere

¹ In the 1945-7 episode the Treasury Bill Rate was held at virtually the same level as the bank's Deposit Rate, and the outside public had no incentive to hold Treasury Bills. From 1955 onwards the Treasury Bill Rate has sometimes been appreciably higher than the Deposit Rate, and 'outside' holdings of Treasury Bills have therefore become both large and variable.

else in the system or by a 'shortening' of the whole Debt by substitution of short for long bonds. To the extent that the banking system itself will undertake this 'lengthening' of its assets, the need for any intervention by a special public agency (in this case the 'Public Departments' in their capacity of an investor of funds) is reduced. In the actual historical experience of 1945-7, the Treasury did issue short bonds in replacement of long bonds and the commercial banks did add somewhat (about £200m.) to their 'Investments', in spite of the rising demand for Advances (which rose by over £100m.). The banks were encouraged to do this by the great inflation of their liquid assets caused by the operations of the Public Departments; and to the extent that this increase in bank 'Investments' occurred, the need for the Public Departments to take up medium-term and long-term securities was reduced.¹

When such large resources were at the disposal of the authorities and when they were supported in some measure by the commercial banks (despite the danger of infection of bankers by the public scepticism), why did the 'ultra-cheap-money drive' of 1945-7 fail? For fail it did: in the first months of 1947 the long-term and medium-term rates began to creep upward again, the long-term rate passing 3 per cent. before the end of the year. Fundamentally the failure was due to the market's conviction, backed by very large-scale willingness to exchange securities for money, that 2½ per cent. was, in the circumstances of high demand for real capital investment and scarcity of resources, an unnaturally low rate that could not be expected to last.

It was obvious that, in the prevailing economic

¹ It might be supposed that the Government could assure itself of the maximum support from the banks by exercising its powers to issue Directions under the Bank of England Act (1946), calling upon the banks to increase their Investments *pari passu* with their liquid assets. But this legislation was passed only towards the close of the period in question, and even at a later date it would have been difficult for the Government to force the commercial banks to take a step that they might believe (if they shared the public expectation of falling security prices) would involve them in very heavy capital losses.

circumstances, even 3 per cent. was an unnaturally low rate, defended only by the stringent physical controls of capital investment. But 3 per cent. had, after all, been held for years, and it was the attempt, the patently juggling attempt, to press it down yet farther, flying in the face of basic conditions, that the market found so difficult to swallow. The distrust felt by the weighty investing institutions and by other important operators (who were most influential in formulating the market demand schedule for government securities) was perhaps heightened by the tone of the propaganda speeches of the then Chancellor of the Exchequer. At any rate, the demand curve for money (in exchange for fixed interest securities) proved both flat and unstable.

The instability of the position to which the authorities drove the securities market in 1946-7 is due to the influence of speculation. This has been explained by Professor F. W. Paish (*The Post-war Financial Problem*, pp. 19-21):

So long as interest rates are falling and prices of securities are rising, the movement will be assisted by those who hope for capital profits from its continuation. The incentive to look to capital profits rather than to income is increased by high rates of taxation on incomes without corresponding taxes on capital profits. This incentive reaches almost absurd levels in the case of the very rich man paying surtax at maximum rate, for whom sixpennyworth of capital appreciation is worth a pound of gross income. But as soon as the rise is checked, and security prices look as if they are more likely to fall than to rise farther, speculation works in the opposite direction. When interest rates are low, it takes several years even of gross income to make up for the capital loss due to a small rise in interest rates, while with high rates of tax the number of years of net income lost by capital depreciation will be very much larger. If we take a $2\frac{1}{2}$ per cent. rate for irredeemable securities, and $\frac{1}{2}$ per cent. as the gross rate obtainable on deposit account at a bank, the difference in annual net yield, with income tax at 9s. in the pound, is only £1. 2s. 0d. The capital loss from a rise of only $\frac{1}{4}$ per cent. in the rate of interest from $2\frac{1}{2}$ per cent. to $2\frac{3}{4}$ per cent. is just over £9. Thus even this small rise in the rate of interest would wipe out the

whole of the net yield on the securities for over eight years, and if an investor expected a rise in interest rates of even this magnitude within the next eight years it would pay him better to keep his money on deposit at a bank. For a very wealthy man, paying the maximum rate of surtax on part of his income, the net yield is only 1s. 3d. per £100 or 1s. per £100 more than on bank deposit. At this rate it would take him over 180 years to make good the capital loss due to a rise of $\frac{1}{4}$ per cent. in the rate of interest. Thus a surtax payer cannot afford to take the risk of capital depreciation unless it is balanced by an at least equal chance of appreciation. The result of this is that as soon as a further fall in interest rates becomes unlikely, surtax payers and, to a somewhat smaller extent, income-tax payers, must take their profits, even if it means getting only $\frac{1}{4}$ per cent. interest on bank deposit for years together. Thus a high level of security prices, reached with the help of speculative purchases, may prove very difficult to consolidate once the rise ceases.

Under this influence, once the top of the market seemed to have been reached, it began to wobble, and the authorities had to pump more and more deposits into the system in exchange for securities unloaded by the public on to the Public Departments. The amount of new money ran into figures that became alarmingly high—£900 millions, a 20 per cent. addition to the previous total of deposits, in little more than a year. At this stage the authorities got cold feet. Given market sentiment, creation of bank deposits on an enormous scale would have been necessary for holding the $2\frac{1}{2}$ per cent. line; the only alternative was retreat. Support was withdrawn and the long-term rate slipped back to 3 per cent. and beyond, although short rates remained pegged until 1951.

In later years the general tendency of the authorities has been to acquiesce in market movements towards higher rates of interest, both short and long; indeed, in the years 1955–7, short-term rates were deliberately pushed upwards because of the chronic weakness of the pound externally. Throughout the fifties the authorities were pressing, more or less energetically, a policy of ‘funding’

which was designed (not always successfully) to work in the direction reverse to that of 1945-7.

They sought to sell long-term securities, using the proceeds to pay off, without replacing, Treasury Bills and other short-term securities. The effects of such a process of funding may be seen by reversing the operations described on pp. 205-11 above. In so far as the sales by the authorities are matched by private purchases of long-term securities and running-down of private holdings of Treasury Bills, there is no effect on the balance-sheets of the banks: the liquidity position of financial institutions will be unchanged, although the liquidity of the general public has been reduced. On the other hand, the public may use bank deposits to pay for the long-term securities purchased from the authorities, in which case the banks have in effect to finance the transfers (of deposits into Treasury ownership) by reducing their own holdings of Treasury Bills. In this event, while the liquidity of the public is reduced in the sense that bank deposits have been replaced by long-term securities, the liquidity of the banks has also been reduced. Pressed far enough, this reduction of banking liquidity will lead the banks to sell some of their holdings of government securities, those nearest to maturity being generally selected for this purpose. This will tend to further depression of the market in securities, especially towards spreading the pressure of falling prices (rising interest rates) over the shorter end of the range of maturities of government securities. The reduction of bank liquidity may also make the banks rather less willing to make advances to customers (whereby the tightening of the situation and depression of security markets is further generalized) though in the fifties this point was not in fact reached.

The habits of the banks, in regulating their portfolios of investments, thus tend towards the same effect as does the rigidity of public expectations about the future level of interest rates: it is difficult for the authorities to enforce

a policy of high long-term rates without persistence in fairly high short-term rates. Various technical devices may, however, be used in order to influence market expectations; for example, when Bank Rate was reduced from $5\frac{1}{2}$ to 5 in February 1957 the official operator in securities made a point of holding unchanged the prices at which he was selling long-term securities, although market prices were rising generally.

Against a policy of raising long-term interest rates by pressing official sales of long-term securities it is sometimes objected that such an official attitude would lead to a 'drying-up' of the demand for these securities, thereby compelling the Government to resort to finance by short-term securities (especially Treasury Bills), with the effect of raising the liquidity of the banks. The argument has some force; the government broker can always sell most on a rising market. Astuteness in the day-to-day and hour-to-hour handling of official operations can give the authorities some of the best of both worlds, and the Bank of England in recent years can claim to have served anti-inflation policy in this way.¹ But in the main a choice has to be made, especially when official policy calls for any substantial disturbance of market expectations. The authorities may be willing to sell securities at low prices (high interest rates) but be able to sell none because the public thinks the bottom has not yet been reached; are they then to reduce interest rates although the state of the economy calls for a continuance of high rates?

The choice must depend upon the relative importance attached to high long-term interest rates on the one hand and the tightness of bank credit on the other hand. If high importance is attached to the level of long-term interest rates (for dampening investment programmes and stimulating savings) and the demand for bank-credit is thought relatively harmless (on the assumption that it is a

¹ The reader should, for further discussion of this difficult question, refer to Chapter VII of the *Radcliffe Report*.

consequence of the level of business activity), the choice should be for the high interest rate. In fact, however, bank-credit is the easiest kind of borrowing for many firms and individuals, and it can be used as a temporary substitute for long-term finance. The dampening of demand by the high long rate may easily be countered by additional demand financed by bank-credit. Hence the case for buttressing an anti-inflation policy of high interest rates by more direct control of the availability of bank advances.

IV. *Selective Credit Control*

Through most of this book the treatment of authoritative control of the banking system has been in terms of *quantitative* control—control of the quantity of bank money and the rates of interest at which business men can finance their activities. This emphasis reflects the main strand of thought about central banking during the last hundred years or more, but it has never been quite the whole story. The alternative of *qualitative* or *selective* control has a long history, though generally in the background; in the last twenty years it has been greatly developed. The basis of qualitative control is that, consistently with a general credit situation appropriate to a healthy economic system, credit may be so easy to obtain for some purposes that demand expands unduly in particular directions, or speculative activities are over-excited and endanger the stability of the whole economy. A general restriction of credit in such circumstances is undesirable, yet something must be done in particular directions. A further development of selective credit control is its use as a supplement to general quantitative control when the latter cannot be expected to act either quickly or strongly enough to deal with an inflationary situation.

Some measure of selective control comes naturally to central bankers bred in a banking tradition. For any good banking, as distinct from central banking, obviously depends upon a qualitative, a selective, approach. The good

banker is the one who can distinguish the sound from the unsound borrower. His whole life is spent in selecting, in deciding which lines of activity may be safely supported, as well as distinguishing the wise and honest from the foolish men and knaves. So in the nineteenth century the Bank of England as a banking corporation modelled its relations with the discount market and other borrowers partly on the precepts of sound commercial banking. Paper eligible for discounting had to bear two names that implied some guarantee of the wisdom of the particular transactions giving birth to the paper. The Bank of England had a fright in 1857, when it saw that the appetite of the discount market for any discountable paper had led to foolish speculation, especially in the North American trade touching Liverpool and Glasgow. Thinking that it could not protect itself (or the market) against such unhealthiness, it withdrew for a time into isolation from the market. When, in the interest of central-banking development, it emerged from its isolation it was more careful than ever before to watch the quality of the paper handled in London, and in the course of the following decades it exploited its growing contact with the market to influence the quality standards ruling in the market generally. By the early nineteen-hundreds its power, in this as in other respects, had grown very considerably, and the experience of London in 1906-7 afforded an instructive contrast with that of fifty years earlier. Again the crest of the trade boom was marked by rapid speculation in New York and in North American trade generally; but on this later occasion the Bank of England discriminated persistently through the years 1906 and 1907 against 'North American paper'—any bills that appeared to be peculiarly associated with the American speculative boom. The comparative ease with which the crisis passed in London must be ascribed in some measure to this action of the Bank—the *qualitative control* it had exercised to restrain speculation in particularly dangerous directions.

Because the central bankers of that day, and most other people who thought, spoke, and wrote about monetary matters, were bankers in the ordinary sense, the relevance of these qualitative aspects of control was greatly exaggerated in the current mode of thought. This had unfortunate effects in the fashioning of the central-banking arrangements of the United States. After intermittent discussion extending over decades, the United States authorities were frightened by the 1907 crisis into a grand inquest on the problems of monetary control; and after this inquest the Federal Reserve System was established. Into the legislation there was written the doctrine that a central banker may lend only on sound commercial paper. The eligibility of rediscountable assets was narrowly defined—so narrowly that when the System faced its first major test, in 1932–3, it was unable to release cash quickly enough to avert catastrophe.

Meanwhile, the theory of central banking had become, especially in Britain, a more conscious theory. In the works of Hawtrey and Keynes particularly, the ideas of quantitative control, and of the implications of the central bank's position as lender of last resort, had been carried forward far beyond the elementary lessons of Bagehot. When the American crisis of 1933 discredited the narrow definitions of rediscount eligibility, the ascendant doctrines of quantitative control received fresh impetus. But American experience had at the same time, and in a quite different way, afforded cause for reconsideration of the alternative—or rather supplementary—policy of qualitative control. The roots of the financial crisis of 1932–3 went back, it was generally agreed, to the boom of 1927–9. Now two prominent features of this boom were the unhealthy extremity of the stock-market speculation and the boom in durable consumption goods, the latter fostered by the support given by instalment credit to the purchasers of the new durable consumption goods. The Wall Street boom was the more glaring of these two evils, and

it had been a thorn in the side of the central bankers even while the boom lasted, owing to the prevalent (but fallacious) notion that Wall Street was drawing credit away from its proper uses in legitimate industry and trade. It was in the light of this experience that the Securities Exchange Act of 1934 gave to the Federal Reserve System powers for regulating lending (not only by banks) for stock-market speculation. Similarly, the wartime control of instalment credit was revived from 1950 to 1952, in the belief that variations in consumer credit finance a peculiarly unstable part of consumers' expenditure. In 1950-2 there was temporary regulation of credit for 'real estate construction'; this again was designed to check undue expansion of demand in a particular direction. There was also during this Korean war period a system of 'voluntary credit control' under which banks and other important groups of lenders agreed principles on which they would curtail credit facilities in particular directions. Since 1952 the United States authorities have in general reverted to quantitative methods of credit control; but the control of credit in the securities markets remains, and there is little doubt that selective controls would be revived if highly speculative conditions reappeared.

In Britain, as in many other countries both inside and outside the Commonwealth, selective controls were employed during the war and were in post-war years elaborated and extended as part of the effort to counter the persistent post-war inflation. The control took the form of a series of 'requests' by letter from the Chancellor of the Exchequer to the Governor of the Bank of England; behind these 'requests' stood the unused power of the Treasury under the Bank of England Act, 1946, though the sense of national responsibility characteristic of the English banks made it unnecessary for the Chancellor or the Governor to refer to this statutory authority. The detailed form of request varied from time to time; there was throughout frowning upon the use of bank advances

for 'speculative' purposes, and request to give priority to production for export or for the displacement of exports, for improving the national fuel position and, more generally, for improving industrial efficiency. The negative elements in the requests were more stressed from 1951 onwards, particularly in 1955-8: the banks were asked to examine more stringently applications for hire-purchase finance, and eventually they were requested to reduce the total of advances used for this purpose. They were also asked to avoid making advances to borrowers otherwise than in 'the ordinary course of business', except with the concurrence of the Capital Issues Committee. This last restriction was designed to give support to the screening of long-term finance by the Capital Issues Committee: 'the ordinary course of business' was supposed to exclude plans of capital development, which the banks might otherwise be willing to finance in the early stages.

In July 1955 the Chancellor of the Exchequer further developed this informal control. He called upon the banks 'to reduce the amount of credit below what they would be glad to give in less difficult times', and added that he looked for 'a positive and significant reduction in their advances over the next few months'. What would amount to 'a positive and significant reduction' he did not specify, but the banks agreed between themselves that an average reduction of 10 per cent. was the magnitude at which they should aim. In giving effect to this request, the banks discriminated against hire-purchase finance, which suffered much more than the average reduction, and in favour of those priority uses (stimulation of exports, &c.) repeatedly stressed in Chancellors' requests. The non-priority items—particularly those classified by the banks as 'personal and professional'—inevitably suffered severe restriction; otherwise the length and breadth of the priorities list would have precluded any sizeable reduction in the total of bank advances.

The administration of this control was left entirely to

the banks themselves. Each bank had its own way of instructing branch managers and other lending officers in the enforcement of the control, and considerable effort was made to secure uniformity of application. There was no system of inspection, no *ex post facto* check on the granting of advances. In the absence of any check, competition between the banks tended in the course of time to weaken refusals: there was always the feeling that the other bank across the road might take a less severe view of a particular customer's needs. This weakness of the control was probably quite serious in the earlier post-war years, especially in the period when almost every industrial activity could be squeezed into one or other of the 'priority classes'. It was therefore necessary for the authorities to try to pull the banks' standards of enforcement up from time to time, as was done in 1951 for example. But in the more extreme phase into which the control passed in 1955 this weakness became of less account, for the banks agreed among themselves that no bank should accept as a customer anyone whose desire to switch bankers followed a refusal of credit. This was a serious limitation of competition between the banks and the bankers themselves expressed their dislike of it, though they accepted it as essential as long as severe credit restrictions had to be enforced under the Chancellor's requests.

The weakening of competition between the banks is not the only important disadvantage of this control. More important from the point of view of the efficient use of national resources is the fact that any control administered along these lines must tend to favour the established borrower and the established business. As a temporary emergency measure, a control that gives the 'ration coupon' to the established consumer, and on the basis of previous consumption, is good enough; but as time goes on it becomes less and less appropriate and interferes with the efficient redistribution of productive resources. In the nineteen-fifties the restrictions lasted long enough (they were

not removed until mid-1958) for these disadvantages to be serious.

Nevertheless, there are times when it is right that the disadvantages of this form of control should be stomached. The bank advance is, in contemporary Britain, usually the best and often the only way of getting finance on reasonable terms for a very wide range of business firms and individuals; as long as this is so, the quick effects of control can be an important supplement to the slower working of the conventional methods of banking policy. There may also be occasions when short-lived restriction alone is appropriate, and then direct control of bank advances may be preferable to a general raising of interest rates. More generally, we can say that when an unusually difficult situation calls for sharp effects, direct control of bank advances can be justified; its disadvantages are of the kind that point to early relaxation rather than complete avoidance.

BANKING AND MONETARY POLICY IN THE UNITED STATES: A COMPARATIVE STUDY

1. *Commercial Banking*

THE banks in the U.S.A. may properly be said to form 'a banking system' in the important sense that all are linked directly or indirectly with the New York money-market and all look to one central bank, although that central bank is federal in organization and has its chief seat of government in Washington, 200 miles away from the New York money-market. But there is no dominance of the system by a few gigantic banks, as the English system is dominated by the 'Big Five'. In England the same six or seven banks appear in almost every town, and they are doing much the same kind of business as in any other town. This is not unlike the position in the State of California (a country in itself) but over the remainder of the United States the banking scene is quite different. There are more than 14,000 banks in all, and they vary so greatly in size, type of business, and outlook that it is difficult to generalize in describing the banking services available to the public. This variety also makes the technical problems of central banking quite different from those in England and most other countries.

Despite the concentric forces that have been felt in American banking, as elsewhere, the system is still overwhelmingly one of 'unit banks', not branch banks; but in this also there is wide variation. The development of nation-wide branch banks has been prevented by law, and still more by the traditional feelings in which the legal restrictions are deeply entrenched. These feelings are derived to

some extent from the historical fear of the newer west for the money power of the older east; they also express the more general feeling in every region against remote control, and the distrust of any incipient monopoly of finance. The laws restricting branch banking are essentially those of the forty-nine States, and they vary from one State to another. In sixteen States (including California) branches are allowed all over the State; in nineteen, branches are allowed, but are limited to relatively small areas; in the remaining States, branches are in general not allowed. No bank may open a branch outside the State in which its head office lies.

Within these limits, branch banking has grown quite rapidly since 1930, and particularly since 1945, but the position still contrasts sharply with that in England. The eleven London Clearing Banks have between them some 9,700 branches; of the 14,242 American banks, seven out of every eight have no branch at all, and the remainder (1,889 banks) have between them only 7,252 branches. Even among those having branches, it is exceptional to find more than two or three branches, and these branches are often in the same town as the head office. Only about 200 banks have more than five branches each; only three have more than 100 branches each. California is the State where branch banking has gone farthest: here the Bank of America, the largest bank in the world, has over 600 branches, and five other banks have between them 400 branches. In New York State there are 111 banks with about 600 branches. At the other extreme, Chicago has 74 unit banks which are not allowed to have branches at all.¹ Elsewhere there is great variety; in so far as there is a norm, it is the 'unit' or single-office bank serving its small local community. The fact that there are 14,000 banks

¹ In Chicago many of the routine services normally available at banks are provided by 'currency exchanges'. These offices (to English eyes, a clumsy device) help Chicago to make do with extraordinarily few banking offices.

therefore does not mean that it is a highly competitive business; the large number of banks reflects the large number of towns, and many towns have only two or three banks, or sometimes only one. In the great centres, especially New York, there are of course many banks, and these do compete with each other as keenly as bankers compete anywhere.

Nevertheless, the picture of a great number of small banks is to some extent illusory, for large-scale organization plays a large and increasing part. 'Groups' or 'chains' of banks, under substantially common ownership and some degree of common control, have developed to defeat in effect the restriction of branch banking. There are no reliable figures, but some 400 banks are believed to be under the control of forty-six holding companies. In terms of deposits, much the biggest group is the Transamerica, with ten banks spread over six States; there are also big groups in Minneapolis and New York State. The scale of bank organization has also been greatly modified in recent years by an amalgamation ('merger') movement affecting some of the largest banks in the country, including the New York giants and big banks in Pittsburgh, Boston, Dallas, Kansas City, Baltimore, Washington, D.C., and elsewhere. This merger movement has been going fast enough to arouse discussion, and the English arguments of 1917-18 (when the 'Big Five' emerged) have been echoed across the Atlantic. The degree of concentration of banking in many of the large cities is now very high, and it is no longer possible to describe the United States, even outside California, as a country of small banks. What is still lacking, outside California, is the wide network of branches. The United States remains predominantly a country of local banks. In general, the American people prefer it that way; but times are changing.

The structure, and the sentiments that lie behind it, pose problems of control quite beyond anything existing in a compact system of the English type. In England,

banking opinion can crystallize among a group of men small enough to sit round a small table, and the wishes and intentions of the authorities can be made known to such a group without anyone crossing more than a street or two from his own office. In the United States there are several thousands of men who are entitled to call themselves 'bankers'; they are scattered over a huge area and do not acknowledge New York bankers as their spokesmen or Washington authorities as their political masters in any but the most limited sense. It follows that the organization of banking opinion is a serious business, and the American Bankers' Association accordingly has a liveliness and importance far beyond any analogous body on this side of the Atlantic.

The business of the American banks is primarily to hold deposits and to effect the transfers of deposits (the 'ledger-clerk function') and to make short-term loans to firms and individuals. Among the deposits, 'Time Deposits' are important: the 'savings' aspect of banking business is generally weightier than in England. On the other side of the balance-sheet, their lending to firms includes a sizeable proportion of medium-term loans, and to individuals and firms there are some mortgage loans; in both these particulars American banks are more openly committed than are English banks. Consumer credit-business has become important in recent years. Both short- and medium-term government bonds are held, in important amounts, as in England. There is no precise parallel to the London loans to the discount market, but the great city banks do a variety of loan business with a variety of financial specialists, while smaller banks have, as their second-line defence, deposit balances with other banks.

This business of inter-bank deposits has historically been, and surprisingly remains, of great importance. Before the establishment of the Federal Reserve System the balance of a country bank with its 'city correspondent' served as its reserve in the fuller sense as well as being a working

balance for clearing purposes. The city correspondent bank would allow its country correspondents various facilities as banker to customer; the relationship was very much that between the country banker and the 'London agent' in nineteenth-century England. With the development of the Federal Reserve System these 'correspondent' links would seem to have lost some of their purpose, as all banks can theoretically look to the Federal Reserve Banks for many of the most important facilities. Nevertheless, the habit remains, and inter-bank business is substantial. 'Country banks' hold balances with their big brothers in the various financial and regional centres, and most of these in turn hold balances with New York banks. These inter-bank deposits now form about 8 per cent. of the total deposit liabilities of all banks; one-third of this total is at New York banks. The correspondent relationship is used to facilitate clearing of cheques and remittance business generally; much of this work of the correspondent has been taken over by the Federal Reserve System, but it remains by no means negligible.

The huge number and geographical dispersion of the American banks necessitate elaborate arrangements for clearing and remittance business. To English eyes these arrangements inevitably look cumbersome, but their efficiency is constantly being increased and mechanical methods are more and more used. Nevertheless, the work remains heavy, and it is not surprising that the American customer has to pay much more in commissions for the 'ledger-clerk service' performed by his bank. These costs of using demand deposits check the spread of the banking habit, and in much of the country this is no further developed than in England. In many places, however, the banks have been very lively and enterprising in their efforts to attract new classes of customer, and the number of demand accounts is prodigious.

Time Deposits are received at rates of interest varying according to the periods for which they are fixed, in con-

trast to the English single seven-days category. These time deposits amount to about two-fifths of total deposits. But once we begin using such figures, we must remember the variety among the thousands of banks: quite a substantial minority of the banks have more than half their total deposits in this class. A few have much higher proportions, and approximate to the habits of the mutual savings banks. In catering for the small savers the banks vary a good deal: most of them deliberately seek such custom as a means to developing custom more generally.

Under laws enacted after the great banking crisis of the early nineteen-thirties, most accounts, whether Demand or Time, are protected by insurance with the Federal Deposit Insurance Corporation (F.D.I.C.), a government agency financed by a tax on all insured deposits. The protection is limited to \$10,000 for each depositor in a bank, enough to cover all ordinary personal balances though not of much account to the big commercial corporations. An insured bank has to submit to inspection by the F.D.I.C., a provision that brings into the Federal government's supervision many banks that would otherwise escape its eagle eye. (The F.D.I.C. is only one of many authorities having inspection powers in American banking, but its writ runs further than the others.)

Turning to the function of the banker as a lender to business and investor of surplus funds, the outstanding feature is, as in English banking, a strong preference for the very short-term commitments. What the banker really likes is a customer who wants finance for purely seasonal expansion of stock of a commodity in regular consumption, not subject to the whim of fashion or the vagaries of the weather; but neither American nor English bankers expect this ideal to be approached except in a small minority of cases. But they do have a very strong preference for the *temporary* loan, financing fixed capital only until other and permanent arrangements can be made by the industrialist. Alongside this basic similarity, there is

sharp contrast in the formal arrangements whereby banks lend to the generality of business customers. In England agreement by word of mouth is often deemed sufficient, or there is a simple exchange of letters. In the U.S.A. a formal document of contract is usually drawn up; the lawyers are much more prominent and much more active in American banking. The credit invariably takes the form of a loan in the U.S.A., while in England the overdraft is much the most usual, though not the invariable, form.

As in England, commercial banks in the United States have in the present century experienced a relative shrinkage in the demand for bank credit of the traditional kind: the development of markets for industrial securities and the cash-payment habit in retail trade have undermined the bankers' market. The inadequacy of outlets was particularly felt in the years of slack trade before 1939, when the supply of reserve money had been increased out of all proportion to contemporary requirements, and again after the war, when a long period of government inflation had further increased the lending power of the banks. In these circumstances of money-glut the banks inevitably broadened their ideas in lending policy; the most important, though not the only, consequential developments have been the *term loan* and *consumer credit*.

The term loan is granted for a period of years—three, five, or even ten years—with specific provision for its reduction by regular periodical payments.¹ It is used by small firms as well as large. Particularly it is favoured by firms that are too small to make an issue to the stock markets, and by corporations (notably public utilities) that wish to anticipate investment of undistributed profits and can reasonably expect to make the repayments as the profits emerge. Banks normally 'syndicate' term loans for all

¹ The maximum period tended to increase in the long period of easy money, and has tended to shorten in the tighter conditions of the mid-fifties. Sometimes arrangements are concerted with insurance companies, who take the later maturities while the banks are paid off in say the first five annual repayments.

but small borrowers: that is, they agree among themselves to contribute jointly to the borrower's requirements and to share correspondingly in the repayments. The banks like this business so much that they do it at rates of interest only $\frac{1}{4}$ or $\frac{1}{2}$ per cent. above the corresponding rates for business loans. In amount the term loans with other loans fixed for more than one year now represent about one-third of the total of the banks' loans to business. English banks sometimes have with borrowers arrangements analogous to those of the term loan, but the proportion of such business is probably smaller in England than in the U.S.A.

The other big development of the latest generation is in the financing of instalment purchases by consumers. About half the bank loans for this purpose are made to specialist finance companies and sales organizations which do the final lending to the consumers. Even so, the amount of direct credit to consumers is very large: about an eighth of total bank loans, and one-third of all instalment credit. Some banks make a special line of it: they have a separate part of the counter where buyers of cars, refrigerators, &c., go to arrange an instalment loan from the bank, and the service is pressed on the public by vigorous advertising. The banks go to great expense to obtain information on the credit-worthiness of these customers; this keeps the charges quite high, although bad debts have been extraordinarily slight. Banking opinion is not wholeheartedly in favour of this kind of business, but many bankers regard it as the most effective way of attracting customers who will eventually make wider use of banking services. Terms of lending in this class have sometimes been directly regulated by the Federal Reserve System.¹

The banks are also quite openly in the business of loans on real estate mortgage. Some they handle directly, but they also lend substantially to other financial organizations who lend to the property-owners. This is a business English bankers prefer to leave alone, and there are

¹ Cf. p. 221.

misgivings in the U.S.A. The freedom with which banks indulged in this business was certainly one of the elements of instability in the boom of the late twenties; the question of selective control by the Federal Reserve authorities has been much discussed. Experience of that same boom has also been responsible for the control of bank lending to the securities markets; this is a class of lending that was once very big indeed. Its amount now is trivial in relation to total bank lending, though not insignificant for the New York banks which do most of it.

In addition to his loans to customers, which the banker rightly regards as a chief justification of his existence, the U.S. banker has to hold 'cash' reserves which are authoritatively specified either by the Federal Reserve System or (in the case of non-member banks) by State law, and he has to hold cash in his vaults and tills for everyday purpose. There is one other bulky element among his assets: his portfolio of securities, principally U.S. government bonds. Nearly two-thirds of the banks' holdings of government securities are within five years of maturity, and nearly all are within ten years. This implies a shorter average life than that of an English bank's portfolio of government securities, but in this respect English and American habits have been becoming more alike—in England the average 'life' has been shortening while in the U.S.A. it has been lengthening.

In considering every aspect of their lending and indeed of all their other operations, it is essential to remember the immense variety among American banks. In New York City, at the one extreme, the banks' portfolios consist of genuinely short-term loans and substantial 'term-loans' to trading and industrial corporations, with some very short loans to financial operators of one kind or another; their loans to agriculture and on mortgage hardly exist. At the other extreme, some country banks may have as much as half their money out on real estate or in poorly-secured loans to local farmers, and the rest largely in government

securities. Between these two extremes, every possible variety is ranged: there is no standard balance-sheet in American banking. Variety of business makes for some variety in costs, and this is reflected in varying charges to customers, especially where competition is weak. In England the same kind of borrower pays the same kind of rate on his loan, whether he is in London or in a petty market town in the North, and the rate he pays is not much higher than that charged to the big customers. Costs are spread over the whole country. In the predominantly unit structure of the U.S.A., on the other hand, costs tend to stick where they fall, and the small country bank lending to the small borrower is apt to charge much more than a great city bank charges to a big customer whom it is afraid of losing to a rival bank. The variety of assets-structures has also its implications for the technique of control by the central bank; before pursuing this, we must look in some detail at the New York money-market which has important bearing both on the behaviour of the commercial banks themselves and on the technique by which the central authorities seek to control them.

II. *The New York Money-market*

Among the many changes that have occurred since the first edition of this book was written, none has been more striking than the developments of the New York money-market. Gone are the days when the market was primarily concerned with very short loans by banks to the Stock Exchange. Stock Exchange firms can still get these short loans from the banks, but this business is largely done on a negotiated basis. The weight of money-market activity is now in the hands of a relatively small group of dealers, both banks and non-bank dealers, who are chiefly concerned with very short government paper and with day-to-day balances at the New York Federal Reserve Bank. Like the London foreign-exchange market, the New York

money-market is essentially a network of telephone lines, linking among themselves the Federal Reserve Bank (which also acts as agent for the U.S. Treasury), the five great dealer banks, and about a dozen non-bank dealers clustered in the Wall Street area, but also linking them with other dealers in securities, a variety of miscellaneous financial institutions, and with the larger banks throughout the country.¹

There is still a market in the older instruments, notably *commercial paper* and *bankers' acceptances*. The commercial paper consists of short-term promissory notes, originating in some 350 firms in all sorts of business all over the country. The notes have lives of three, four, or six months; their main use is for seasonal finance and their nearest parallel in London is that comparatively rare bird, the inland bill of exchange. This commercial paper, as also the similar paper created by finance companies, has revived slightly in recent years, and represents for industry and trade a source of finance competitive with the ordinary bank loan. Bankers' acceptances, comparable with fine bank bills in London, have also revived somewhat, but they show no sign of returning to the importance they had in the nineteen-twenties, much less of assuming that central place in the monetary system that was once intended for them. The really important business of the market is in neither of these instruments but in Treasury Bills and other short government paper, in 'Federal Funds', and in very short loans to dealers against their holdings of government securities.

In the short government securities, the five 'dealer banks' (two of them from Chicago) and the non-bank dealers all operate very much as do London stock-jobbers, in that they stand ready to buy or sell at any time,

¹ This very brief account of a market that is changing rapidly is largely based on the exceptionally authoritative account by Robert V. Roosa, *Federal Reserve Operations in the Money and Government Securities Markets*, published by the Federal Reserve Bank of New York, 1956.

irrespective of their momentary holdings or their desire to hold any security. They necessarily hold a 'stock-in-trade'; the non-bank dealers operate with funds far exceeding their own capital, borrowing from the big New York banks and from 'out-of-town' sources against some of the securities that happen to be in their portfolios. At the short end of the market (in which alone the Reserve Bank normally operates), there is a very active business in Treasury Bills. These are broadly similar to British Treasury Bills; they are all three-month bills, issued in weekly batches by tender. The tenderer for London Treasury Bills has the option of taking them up on any day in the following week, whereas the New York issue is for one fixed day only; in this detail the more flexible London system generally makes for smoother markets—when it does not, the central bank knows the relevant facts. In London the tender is dominated by the syndicated bid of the discount houses, while the great English banks do not tender at all; this does not by any means imply a non-competitive market, though competition is much less sharp than in New York. There the competitive bidders are the big and medium-size banks (including many out-of-town), the dealers, and non-bank buyers (financial institutions and other large businesses) who tender through the agency of the big New York banks. Non-competitive bids are allowed, having been introduced in order to popularize the Treasury Bill among small banks who cannot be expected to be expert in fixing a price. New York dominates the tender—about two-thirds of the weekly issue goes first into New York hands, though much of this passes into out-of-town hands. The New York dealers take up large amounts not to hold but for quick resale to non-bank buyers, small banks, and even to large banks when these have been unsuccessful at the tender. The whole business is more complex than in London, and the greater heterogeneity of the New York market almost certainly makes for conditions closer to Marshall's perfect market.

Once issued, U.S. Treasury Bills continue to enjoy an active market. The dealers (including dealer banks) establish bid and offer prices; they deal as principals, making their profit out of the 'turn'; there is virtually no broking. Even the large banks sell as well as buy, unlike the London banks, which are ordinarily only buyers of Treasury Bills. The Federal Reserve Bank is always active in this market; it participates in the weekly tender only to replace expiring bills in its portfolio, but it continually has important transactions with dealers.

If banks, after making what adjustments they wish in their portfolios of commercial paper, acceptances, and government securities, are short or long of cash, they can operate in the Federal Funds market before being reduced to borrowing at the Federal Reserve or holding excess reserves (according to whether they are short or long of cash). This rapidly developing market in Federal Funds is something for which London has no precise parallel, the nearest to it being the bidding by the discount houses for their marginal funds before they resort to the discount office ('the front door') of the Bank of England. The demand for Federal Funds (balances at the Reserve Bank) is a demand by banks and by dealers in government securities. The New York banks use this market to such effect that even in the 'tight' years 1954-5 their borrowings from the Reserve Bank were neither extensive nor prolonged. The supply of Federal Funds is mainly by banks, the big New York banks again predominating, though out-of-town banks increasingly put funds into this market instead of carrying barren excess reserves. There are also non-banking sellers, such as dealers in government securities after they have sold bills to the Reserve Bank, and agents of foreign banks who have by some means or other come into possession of balances at the Reserve Bank. The market is extremely active and 'a free higgler's' market if ever there was one', and the tighter monetary conditions of the middle fifties drew into its vortex temporarily surplus bank-cash

from all over the country. Banks outside as well as inside New York act as dealers, maintaining a wide network of contacts through which they buy and sell Federal Funds. One Wall Street brokerage firm has been prominent in centralizing transactions and more or less making the price; and the big banks both deal directly with each other and act as brokers. Since there are always some banks willing to borrow at the Reserve Bank, and the required eligible paper (nowadays effectively government securities) is always available, the price of Federal Funds cannot rise appreciably above the Reserve Bank's discount rate; its practical range is from this rate down to one-eighth of 1 per cent. It can fluctuate rapidly throughout this range, though it tends to hang close to the Reserve Bank's rate when the authorities are keeping the banking system rather short of reserve cash.

Besides Federal Funds, which are balances standing to the credit of banks in the books of the Reserve Bank, and transferable on the day on which instruction is given, the market deals also in 'Clearing House Funds'. The latter are cheques drawn on New York banks and passed through the Clearing House; since they do not go through the Clearing House until the following day, they are 'money tomorrow'. Federal Funds being 'money today', an exchange of Federal Funds for Clearing House Funds is in effect a loan overnight.

The dealers, who need money to enable them to hold securities, search for both these classes of 'money'. Normally, the New York banks only provide the dealers with Clearing House Funds, but banks outside New York provide Federal Funds. The dealers secure part of the money they require by 'buy-backs', whereby a spot sale at a fixed price is linked with a forward repurchase, also at a fixed price but slightly higher in order to allow the other party to gain what is in effect interest on a short loan. This device has become very important since the war; in rather tighter form, and known as 'sale-and-repurchase

agreement', it is used by the Reserve Bank as a way of putting cash into the hands of the dealers when markets are tight and the authorities do not wish to force more bank borrowing at the penal rate 'at the discount window'.

The entire market is highly competitive and is developing rapidly. There is an immensely complicated criss-crossing of transactions, with both non-bank dealers and the New York banks competing for the spare cash of out-of-town banks and of the whole gamut of firms both inside and outside New York. Development of the market along these lines makes for more complete use of the spare cash of one bank to meet the shortage of cash in another bank; the system is in this respect becoming more like that of London, where 'spare cash' is virtually eliminated by the operations of the discount market. But the number, variety, and geographical dispersion of the American banks makes it rather unlikely that the extreme position of London will ever be reached; for the present, certainly, America's central bankers have to work on the assumption that 'at any given moment some banks will be short of cash while others have excess.

III. *Control of the Quantity and Price of Credit*

Responsibility for controlling the American banking system is settled by the laws of the federal union and of the forty-nine component States. A bank can be registered under federal law, in which case it is called a 'national bank', or under the law of the State in which it is situated, when it is a 'State bank'. State laws vary appreciably, and they vary from federal law, but all prescribe elaborate conditions banks must fulfil. Chief among these are provisions relating to the capital of a bank, its cash reserves, its accounts, and the inspection of the bank by officers of the government (State or Federal) concerned; there are also generally restrictions on the amount of lending to any one customer. Except for the regulation of cash reserves, these

restrictions have no parallel in contemporary English banking; they have some importance in a unit banking system, but would hardly be appropriate in a highly concentrated system of the English type. The more important controls are exercised through the Federal Reserve System. All national banks are obliged to be members of the System: State banks have the option to be members, and enough of them are members to bring the total of member banks up to 6,393 (end of 1957) having 85 per cent. of total bank deposits. Supported by the restrictions imposed by State laws on non-member banks, the weight of these member banks in the entire banking system is sufficient to allow the Federal Reserve System to exercise effective control over the supply of money. The methods whereby the Reserve System exercises this control are the prescription of reserve ratios, operation as lender of last resort, and open-market operations. In addition, the Federal Reserve System has certain powers to control credit in particular directions; these 'selective credit controls' have been briefly referred to in Chapter 9, and the remainder of the present chapter is devoted to the more general controls over the supply of money.

The power of the Federal Reserve System is substantially based on the fact that it is virtually the sole source of cash. Seven-eighths of the actual currency in circulation consists of Federal Reserve notes. The remainder consists of small notes and coin and certain vestigial forms of currency, all of these being issued by the Federal government in much the same way as coins are issued by the Royal Mint in London. Balances at the Federal Reserve Banks, like Bankers' Deposits at the Bank of England, are exchangeable into notes or coin as required by the banks and the public. From this point the two systems diverge; whereas in England the 'cash base' of the banking system is constituted by Bankers' Deposits at the Bank of England *plus* cash in vaults and tills, the analogous layer in the monetary structure of the U.S.A. consists of the bankers'

balances at the Reserve Banks alone, to the exclusion of notes and coin held in the vaults and tills of the member banks. (Banks not members of the Reserve System are subject on the whole to looser rules.) The law requires all member banks to hold at the Reserve Banks balances bearing certain minimum ratios to their own deposit liabilities to the public. The ratios are fixed by the Board of Governors of the Reserve System, and are variable within a wide range set by law in 1935. Against Time Deposits one ratio (in 1959, 5 per cent.) is set for all member banks. In relation to Demand Deposits, different ratios (in 1959, 18, 16½, and 11 per cent.) are set according to the situation of banks in Central Reserve Cities (i.e. New York and Chicago), Reserve Cities, or the Country.¹ For non-member banks, reserve ratios (on the whole, more generous to the banks) are fixed by the various State laws under which these banks operate, and over these ratios the Federal Reserve System has no authority. Thus all banks, whether inside or outside the Reserve System, have clearly defined reserve requirements, and this implies, as we saw in earlier chapters, that the body with power to create or destroy reserve balances has very great influence over the creation of bank money throughout the country. This body is of course the Reserve System itself, for the Reserve Banks can create (or destroy) reserve balances (standing in its own books in favour of banks) by buying (or selling) securities.²

The pivotal position of this Reserve Bank cash depends

¹ This classification has its origins in the pre-Reserve System relations between banks. It was based on the use of some banks (those in Reserve Cities) as bankers to Country Banks, and of Central Reserve City banks as bankers in turn for these Reserve City banks. The classification has become somewhat arbitrary in its working, and the Federal Reserve authorities are understood to support proposals for change, put before Congress in 1959.

² 'Securities' is used here in the widest sense, to include not only such instruments as bankers' acceptances (bills of exchange) and U.S. Treasury Bills and bonds, but also (1) gold certificates issued by the U.S. Treasury to importers of gold, and (2) I O U's of banks on which they borrow from the Reserve Banks 'at the discount window'.

upon the interest the commercial banks have in keeping their reserve ratios reasonably close to the prescribed minima. At most times the profit motive is sufficient for this, given that the banks can look to the Reserve System as a lender of last resort.¹ When, as in the nineteen-thirties, extraordinary circumstances lead to the persistence of 'excess reserves' on any great scale, the Reserve System can reduce these excess reserves at a stroke by raising the required minimum ratios; more usually, excess reserves on a moderate scale can be attacked by open-market sales of securities by the Reserve System.

It is of course in the interest of the Reserve System as the controller that excess reserves should be kept within moderate bounds. For this purpose, as well as for the important purpose of preventing the collapse of the banking system in a crisis, the Reserve System has to be the lender of last resort. A member bank finding that its reserve (balance at the Reserve Bank) is falling below the prescribed ratio can borrow from the Reserve Bank. It borrows either by rediscounting one or more of its customers' 'notes' (I O U's of some form) or by giving its own I O U to the Reserve Bank; normally nowadays it gives its I O U, pledging short-term government securities as cover. The rate charged is the Reserve Bank's published discount rate.

This operation of the Reserve System 'at the discount window' has important features differing from those of the corresponding operations of the Bank of England. Most obviously, whereas the English banks obtain reserve cash only indirectly by forcing the discount houses to borrow at the Bank of England, the American banks borrow directly from the Reserve System. Given the unit structure of American banking and the huge area of the country, direct access to the discount window implies the necessity of a wide spread of Reserve Bank offices. For its service as lender of last resort the Bank of England could perfectly well be confined to a single office, as indeed it is for this

¹ Cf. p. 96 above.

purpose. But the Reserve System of the U.S.A. must be a *Federal Reserve System*: a network of Reserve Banks and Branches, totalling thirty-six offices in all, spread over the length and breadth of the country. This dispersion of the System's offices is especially important having regard to another Anglo-American contrast arising from the direct access to the lender of last resort: the power of the Reserve Banks to look into the business of the member banks. The action of a Reserve Bank as lender of last resort is not, in ordinary circumstances, a right to which member banks are automatically entitled; it is regarded rather as a privilege they enjoy if they fulfil certain conditions. In general, a member bank is expected to borrow at the Reserve Bank neither continuously nor in amounts large in relation to the general scale of the member bank's total resources.¹ The Reserve Bank is entitled to inquire into the operations of a member bank that wants to borrow, and these inquiries are pressed if the borrowing threatens to become continuous or unduly large. It follows that the organization of the Reserve System must be such as to allow close contact with banks all over the country. It also follows that when member-bank borrowing is increasing, the Reserve System is increasing its power to inquire into, and to enforce objection to, the conduct of member banks. This is a very important power, to which there is no parallel in the English system. The Bank of England acts as lender of last resort to the discount houses alone, and there would be little point in telling them that their difficulties were due to excessive lending by the commercial banks.

The discount rate is in form fixed by each of the twelve Reserve Banks separately. There are arrangements for co-ordination, though not for complete centralization, of these decisions: the individual Reserve Banks 'establish'

¹ This convention against continuous or large borrowing is not entirely one-sided; there is still reluctance on the part of some member banks themselves, a reluctance rooted in the tradition that dependence on another bank was a sign of weakness.

their rates which have to be 'reviewed and determined' by the central Board of Governors in Washington: in effect this means that regional views, if strongly held, have considerable weight, and the twelve rates do not necessarily move in unison when a situation is open to conflicting interpretations. The discount rate is normally a penal rate, in the sense that it is usually above the Treasury Bill rate, but it is below the general run of loan rates and the real check to borrowing lies not in its cost but in the considerations mentioned in the previous paragraph.

In contrast to its work as lender of last resort, the open-market operations of the Reserve System are completely centralized. These operations are decided upon by the Federal Open Market Committee in Washington, and are executed by the Securities Department, generally known as 'the Trading Desk', of the Reserve Bank of New York. Nearly all the operations are now outright purchase or sale of Treasury Bills, but there are occasionally dealings in Bankers' Acceptances, and in special circumstances slightly longer-dated government paper is bought by the System. The Trading Desk has also in recent years developed the system of giving loans, for a maximum of fifteen days, to the dealers in government securities. These loans, known as 'repurchase agreements', take the form of a sale of short government paper by a dealer to the Reserve Bank, with simultaneous forward repurchase. The initiative is with the Reserve Bank, which is not considered to be under any obligation to give automatic relief in this way. The difference in the spot price for the one transaction and the forward price for the other allows the Reserve Bank interest on the effective loan, and the arithmetic is normally based on the official Discount Rate of the New York Reserve Bank.

The impact effect of these open-market operations, whatever form they take, is precisely parallel to the impact effect of open-market operations by the Bank of England: a purchase of securities by the Reserve Bank adds to the

cash reserves of member banks, and a sale of securities reduces the cash reserves of member banks. But what happens after that is different.

The difference arises partly from the varied assets-structure of American banks. At any moment some banks will have excess reserves (i.e. reserves exceeding the legal requirement plus essential working cash) while others will be in debt to the Reserve Banks. If the former greatly exceed the latter in weight—if excess reserves greatly exceed member-bank indebtedness—credit conditions will be ‘easy’ and money-market rates will tend to be clearly below the Reserve Bank’s Discount Rates. Suppose that at this stage the Reserve System, thinking that a boom is threatening to get out of hand, decides to tighten credit: its action will be to sell securities to absorb cash. The impact effect, spread over the system, will be that excess reserves will be reduced, some banks will be forced to begin borrowing at the Reserve Banks in order to maintain the required reserve ratios, and banks previously borrowing will need to borrow more and will encounter more nagging from the Reserve Bank. Money-market rates will rise, as banks generally will be less willing lenders. The further the process is pushed, the rarer will excess reserves become, the more banks will be forced to ‘the discount window’, and the higher open-market rates will rise. If the Reserve System persists in keeping the banks’ reserve position ‘tight’ in this way, the rise in interest rates will spread; ‘the prime rate’ for lending to the best commercial and industrial customers moves as part of this general movement. In recent years it has been usual for this movement of market rates to precede a change in the Reserve System’s own official Discount Rates, but the eventual movement of the latter serves to signalize and consolidate the market movement.

Correspondingly, if the Reserve System wishes to ease credit (fearing trade recession), it will buy securities, so helping banks to shake themselves free from borrowing

at the discount window and adding to excess reserves in banks already comfortable. Open-market rates fall and banks lend more freely. Again, the Reserve System may emphasize easy conditions by reducing Discount Rates.

There are many points of contrast with conditions in London, where Bank Rate changes are traditionally much more important, and open-market operations are regarded primarily as a device for enforcing Bank Rate. The difference is due in part to the unique historical power of London's Bank Rate (a glory, alas! departed), but it is also related to the compressibility of cash in the American system. In London the cash ratio is rigid and the discount houses stand as a buffer between the central bank and the commercial banks; in the U.S.A. the Reserve System can make cash scarcer, with the effect of making all banks feel less comfortable and bringing some of them under direct pressure as borrowers at its own offices.

On exceptional occasions, when the excess reserves have been very large indeed and gigantic open-market sales would have been necessary to bring the member banks to heel, the Reserve System has been able to tighten conditions by raising the required reserve ratios, wiping out excess reserves by a stroke of the pen. Correspondingly, it has been able to ease the credit situation spectacularly by reducing required ratios. But this is a weapon for rather exceptional circumstances; ordinarily the amount of spare cash in the system as a whole is small enough to allow the authorities to rely on open-market operations alone.

With the rapid development of the New York money-market, particularly the market in Federal Funds, the American system is becoming rather less unlike the English system. As dealers scour the banks all over the country for spare cash, excess reserves dwindle; if they completely disappeared, open-market operations would produce their effect simply on member-bank borrowing at the Reserve Banks, and *gradual* changes in the credit climate would be less easy to keep under control. But the system would

still be unlike the English in that the Reserve Banks would still have direct contact with borrowing member banks, and be able to educate the individual banks in the restrictionist policies officially desired.

Meanwhile, the differences in mechanics find some reflection in the differences in ideas about central banking in the two countries. The American system is well adapted to the manipulation, by the Federal Reserve authorities, of the liquidity of the commercial banks: the latter's willingness to lend, and the rates of interest at which they lend, are both highly sensitive to Federal Reserve action. The American authorities in general believe that this is the task of the central bank, and that it need not concern itself directly with what is happening in markets outside the banking system. It may be that, thanks partly to the variety in American banking and to its direct and large-scale participation in the mortgage market, the American economy in general is in fact sensitive enough to authoritative action thus confined to purely banking conditions. At any rate, the present official view in the United States is that central banking should be thus restricted; it is on this that both their presumption in favour of confining open-market operations to the short end of the market and their handling of National Debt problems is based.¹ The business of issue and redemption of government securities is in the hands not of the Federal Reserve System but of the Treasury; high importance is attached to maintaining separation between these two organs of government, though sensibly enough the men running them do consult closely with each other. It is not at all clear that the present dichotomy (the Reserve System busying itself with the banking situation, and the Treasury with the National Debt) can be maintained. The problems of

¹ For an authoritative development of this view see the evidence given by Mr. W. W. Rieffler to the Radcliffe Committee (*Minutes of Evidence*, Qus. 9395-9609 and 9735-9890). A parallel view of the function of the central bank was taken by Dr. M. W. Holtrop (President of the Netherlands Bank) (*Minutes of Evidence*, Qu. 11742-11918).

persuading the public to hold fixed interest bonds in an inflationary world have given rise in recent years—particularly during the 1957–8 recession—to doubts as to the separation of ‘debt policy’ from ‘banking policy’. At the same time, the growth of financial institutions outside the direct purview of the Federal Reserve System has been raising the question whether control of the behaviour of the banks alone is enough, even for the present limited purposes of the Reserve System. These problems are not unlike many of those in England recently investigated by the Radcliffe Committee, and they will no doubt be thoroughly ventilated by the present large-scale inquiry into the U.S. monetary system.

BANKING IN THE NEW COUNTRIES

1. *The Significant Peculiarities of Newer Banking Systems*

THROUGH most of this book the problems and their solutions have been generally stated in terms which apply directly to the highly developed banking systems either of the English type or of the American type. I would emphasize once more that this preoccupation with English and American conditions reflects no notion that those conditions are the ideals from which those of other countries show unfortunate aberrations. Rather our special concern with English and American banking is based first on the fact that those conditions are likely to be of most direct interest to the majority of readers of a book written in English, and second on the fact that the systems of other countries do appear to be developing along similar lines—indeed, they are frequently being forced to develop along similar lines. Nevertheless, there are problems peculiar to other systems that are important to those countries and are also worth studying for the sake of the light they throw on the general principles of banking. The countries to which we shall refer in examples will generally be India, Canada, Australia, and South Africa; but the varying conditions in those countries have their counterparts in the South American republics, in Japan, and in many of the minor countries of Europe. The present or recent colonial territories of the Commonwealth, and similar countries elsewhere, have financial institutions beginning to develop and beginning to raise similar problems.

The important peculiarities distinguishing these banking systems from the more highly developed systems are: (1) the banking habit may be little developed and banking

offices be few and far between; (2) there may be no short-money market, or no satisfactory short-money market; and (3) central banking may not yet be effectively established. In many of them, banking has hitherto been largely in the hands of banks controlled from the great financial centres of the world: the British overseas banks have been and remain immensely important in this field, though the future may lie rather with the indigenous banks. It should not be thought that all these conditions are to be found in each one of the countries we are considering. I believe all of them lack a really good short-money market. But in some—notably Canada and to a less extent Australia—the banking habit is highly developed, banking offices are ‘plentiful as tabby cats’, and the structure of financial institutions bears a family resemblance to those of the traditional centres. Almost all the countries now have central banks, but in many of them central banking has scarcely yet become effective.

Where there is little banking of any kind, as in China, Burma, and in many parts of South America, the bulk of transactions are necessarily settled in cash. Cash forms the greater part of the supply of money, and the most important source of changes in the supply of money is in the variation in the supply of cash. This cash nowadays generally consists of notes issued by the Government or the central bank, though there is normally some metallic coinage for small payments. The changes in supply then occur mainly as a result of changes in the government issue of notes. It is not impossible, under such circumstances, for changes in the banking system to cause disturbances in the price situation; but changes so initiated cannot be violent or prolonged unless they are supported by parallel changes in the supply of cash. An increase in lending by banks to cultivators, for example, would produce inflationary effects of the usual kind; but the inflation would very soon be checked if there were not forthcoming a great increase in cash to support the increased value of transactions. Since

what banks there are will generally be found concentrated in a few great trading centres (Rangoon, Canton, or Shanghai, for example), contact with the banks is generally confined to the traders in those centres. A bank inflation is therefore liable to mean development of speculation and investment in those centres (as in Bombay in the eighteenth-sixties, to take an old but extremely clear example). The presence of trading contacts but absence of banking contacts between the inflationary centre and the hinterland quickly leads to a drain of cash from the centre to the hinterland.¹ This drain of cash quickly checks the expansionist policies of the banks. (The same tendency appears, of course, in a country with a highly developed banking system, especially if there is no branch banking; but the drain of cash into circulation will not be nearly as marked.) Unless banks are very cautious, bank failures occasioned by inability to produce cash on demand are likely to be numerous. In such a country more than elsewhere, therefore, the authorities are likely to be concerned about maintaining the liquidity of the banks and general regulation of their assets. Indeed, it is because historically such conditions were common that government regulation of commercial banking has traditionally been directed to the maintenance of liquidity rather than to subjection of the commercial banks to a central bank.

The second feature which distinguishes these countries from the most advanced banking countries is the absence of a good short-money market. The Canadian banks have an outlet for short-term funds in the local bond markets; and these have been cultivated with success by the young but active central bank (the Bank of Canada). In Australia conditions are more primitive; attempts have been made (with little success) to develop a market in Treasury Bills. In South Africa and in South America there are virtually

¹ This works very much on the lines explained by Senior in his *Transmission of the Precious Metals, Value of Money, and Cost of Obtaining Money*.

no markets in short-term funds though in South Africa new financial institutions established in the nineteen-fifties may eventually make a market. In India there are markets, but the divisions between them—between the indigenous and the European markets, for example—are so difficult to overcome that it is impossible to speak of a market of the kind needed for contact between a central bank and the commercial banks. Indeed, the mutual independence of the various money-markets implies absence of that integration of banking affairs which generally makes it reasonable to talk of a banking *system* though development in this direction is rapid. The great European financial centres have short-money markets which are more or less well developed; elsewhere even in Europe there is little to be said for attempts to develop an institutional structure of the London type and later in this chapter we shall return to the alternative of developing an entirely different technique of central banking.

The third peculiar condition which used to be common in these countries is the absence of an effective central bank. There is now no country of any account which has no central bank; but in many of the smaller countries the newly established central bank has not yet found its feet. Its most important operations are often confined to the foreign-exchange market.¹ This, of course, is a useful function in these days of chronic exchange difficulties, but it is quite a different business from controlling the commercial banks. In general these new central banks have been established in these countries in the expectation that they might develop along the traditional central banking lines. They have soon, however, found their environment unfavourable to any simple emulation of the Bank of England, and it is worth considering how, in the absence of

¹ This is not true of Canada, where the central bank has very definitely found its feet and has been very active not only in the foreign-exchange market but also in the bond market. (See A. F. W. Plumptre, *Central Banking in the British Dominions*, and E. P. Neufeld, *Bank of Canada Operations*, 1935-54.)

the institutional framework of London, a central bank can exercise effective control.

II. *Central Banking in the absence of a Short-money Market*

First there is the problem of central-banking technique in a country which is covered by a network of modern commercial banks, the banking habit being assumed widespread. Of such a country Canada is the leading example; but in Australia and in South Africa conditions in some ways approach it. It is easy enough to subject the commercial banks to the behaviour of the central-bank's assets. To effect this three steps are usually taken: (1) the note-issuing powers of the commercial banks are either abolished or severely restricted; (2) the commercial banks are required to maintain at the central-bank balances bearing a certain relation to their deposit liabilities to the public; and (3) the central bank is constituted lender of last resort. Of these three steps the third and the less radical form of the first are absolutely necessary. The second and the more stringent form of the first are advantageous in that they help to provide the central bank with an income: for purposes of control they are mere embroideries. The constitution of the bank as lender of last resort is fundamental in that it removes from the commercial banks all responsibility for providing reserves against an abnormal loss of cash. The commercial banks can then be relied upon to minimize consistently their cash reserves in order to maximize their profits.¹ The plan of obliging them to hold certain minimum-ratio balances at the central bank, apart from the advantage noted above, merely serves to give point to this expectation that their reserves will bear a constant ratio to their deposit liabilities. Restriction of their note-issuing rights prevents them from adding to their cash by printing more notes. (We assume that there is no right of free coinage in the country: if there is, a stable

¹ Subject to the reservations explained in earlier chapters.

foreign-exchange policy is implicit. The embarrassments of the central bank which follow from the right of free coinage are identical with those which, we shall find below, are implicit in any predetermined foreign-exchange policy being followed.)

In advanced financial centres we are apt to assume that that is the end of the matter. For if the volume of bank deposits is subject to the central-bank's assets the central bank can make the supply of bank deposits (and so short-term interest rates) what it likes simply by manipulating its assets. But in these other countries the manipulation of a central-bank's assets is by no means such a simple matter. Given the absence of a good bill market, the central-bank's assets will ordinarily be government securities, foreign exchange, gold, and perhaps loans to the commercial banks. If the last item does regularly show substantial indebtedness of the commercial banks all is well, for the central bank can impose whatever interest rate it chooses for these loans, and so influence the willingness of the commercial banks to lend to the public. It controls, that is to say, the basic short-term interest rates. But in fact when a central bank is superimposed on an established banking system it is not easy at an early date to lead the commercial banks into indebtedness to the central bank, and such indebtedness appears to be rare in fact. Apart from this immediate consideration there are bound to be periods—and often those periods when the central bank is most anxious to exercise control—when the foreign-exchange situation leads to the commercial-banks' indebtedness to the central bank disappearing.

In its holding of government securities, however, the central bank is not passive—its holding depends on the amount it has chosen to acquire. There is some possibility that the new central banks of the world will be able to control the cash basis partly by manipulating their holdings of government securities. But there is a substantial difficulty which severely limits the utility of the weapon. The

stock markets of these countries, though modelled on the great stock exchanges of London and New York, are inevitably much more limited in their capacity for completing big deals. It is easy enough to suggest that the Commonwealth Bank of Australia, for example, could reduce the cash basis by selling bonds in Melbourne or Sydney; but given the size of these local markets, any very big sales would lead to the closure of the Stock Exchange—because buyers would not ordinarily be forthcoming to take up huge amounts at short notice. The same applies to the opposite process of big purchases—or attempts at purchase—by the central bank. And even when the transactions could be completed it would only be at the cost of enormous variations in prices of the securities. These security price variations might be counted an advantage in that the central bank would be exercising direct influence on the long-term rate of interest. But the Government might fear the reactions of public opinion, the stimulus to speculation, and the possibility of the investment outlet for government bonds being permanently narrowed by the spectacle of wide price variations. And the central bank would have to run risks of substantial losses resulting from price variations of assets it may wish to sell at any time. A central bank might conceivably be encouraged to do this, the Government bearing all losses; but it is most unlikely. In spite of these difficulties the Bank of Canada has developed successfully its operations in the securities market. Canadian debt policy has been on the whole favourable to these developments, and might not always be so, but the success has been striking enough to warrant imitation elsewhere.¹

While internal open-market operations are restricted, the central bank is confined to regulating the cash basis by its operations in gold and foreign exchange. A central bank

¹ So far from wanting open-market operations to cause big changes in market security yields, the tendency nowadays (as exemplified in the 1949 Report on Central Banking in Ceylon) is to advocate open-market operations by the central bank for the purpose of stabilizing security markets (with the ultimate aim of encouraging public investment in bonds).

always deal in either gold or foreign exchange because the holding of a reserve of gold and/or foreign exchange is generally (and rightly) held to be a duty of the central bank. In considering the effects of these operations we shall, for the sake of brevity, talk only of gold. Whether the central bank does or does not choose to turn the foreign balances it acquires into gold does not affect the internal situation.¹ Now there are two extreme possibilities. Either the central bank will consider the price of gold (foreign-exchange rate) fixed and will buy and sell gold at that fixed rate—that is the gold standard condition: or it may fix the amount of home currency it is willing to supply and allow the gold price (foreign-exchange rate) to be adjusted to clear the market. In the former case the amount of home cash it creates by purchase of gold (or the amount it destroys by the sale of gold) is absolutely dependent on the international balance of payments—the central bank has no *control* at all. In this case it is a matter of indifference whether the central bank alone can monetize gold or there is right of free coinage—in either event the supply of cash is fixed independently of the central bank's wishes. We may say that it is desirable that the central bank should in fat years accumulate a reserve of gold and/or foreign balances against the drain that is sure to come in lean years, when the balance of trade is unfavourable. But if the central bank is automatically to create cash as it receives the foreign exchange, the foreign exchange might just as well have gone to the commercial banks. The existence of a central bank does nothing to help.²

¹ Most of the minor central banks nowadays hold both gold and foreign exchange. Gold has the advantage that its value in terms of *other* foreign currencies is not subject to the behaviour of one particular foreign currency. On the other hand, if a country's obligations are largely in terms of a particular currency (e.g. sterling or dollars) it is advantageous to hold some of that currency rather than gold whose value in that currency may vary.

² Indeed, it may make things worse: for in the absence of a lender of last resort some of the stronger banks may take a long view and add to their ratio of gold to deposits in favourable years.

Of these two extremes the latter is not one that could be tolerated as a regular system. It is unthinkable that a country having such an appropriate institution as the central bank should allow the foreign-exchange rates to move up and down with complete freedom from intervention. However strongly opposition to the gold standard is argued, the case for some intervention to steady foreign-exchange movements is unshaken. Yet once the central bank is prepared to intervene, it forswears some of its active control of the cash basis. For it can only intervene (abstracting from the possibility of exchange restrictions) by offering home currency in return for foreign currency, or by offering foreign currency for home currency. Once it does so intervene, the cash basis of the banking system varies with the excess of supply over demand for (or vice versa) home currency in exchange for foreign currency (at the rate at which the central bank decides to hold the market). The gold-standard case is simply the extreme case in which the central bank holds the foreign-exchange rate (gold price) fixed by absorbing all excess supply of foreign exchange or of home currency at that rate.¹ But whether this extreme position is adopted or not, it is inconceivable that a central bank should do otherwise than allow the volume of cash created by absorption of gold or foreign exchange to be determined by its foreign-exchange policy.²

Were variations in the balances of payments of these countries generally small this argument would not be of much account. But the opposite is, in fact, almost universally true. The countries we are considering are in general

¹ From this point of view maintenance of a fixed par value under International Monetary Fund rules works in exactly the same way as a gold standard.

² During the 1950's the Bank of Canada has followed an 'intermediate' policy, intervening continuously in the foreign-exchange market though not rigidly stabilizing the exchange rate. Its control of the cash base has been greatly complicated by these operations in the foreign-exchange market.

producers for export of a *few* primary commodities—either minerals or agricultural products or both. The total value of the exports of any one of these countries is therefore subject to extreme variations, thanks to crop variations depending on weather conditions, the exceptionally great price ranges which apply to nearly all primary commodities, and the lack of diversity in their exports by reason of which great disturbance in the total balance of trade may be occasioned by collapse in a single market. This variability of exports is supplemented in its effect on the balance of payments by the tendency for long-term capital movements to be more or less parallel (perhaps with some time-lag) to the movements of exports. Prosperity of a country makes that country more attractive to investors and the inflow of long-term capital therefore has a natural tendency to be concentrated in years of favourable balances of trade.¹

Given this extreme variability of the balance of international payments and a desire to steady (even if not to stabilize) the foreign-exchange rates, a central bank must be prepared to absorb large amounts of gold (or foreign exchange) in the fat years and part with them in the lean years. One of the advantages of having a central bank in such countries has sometimes been stated as the desirability of having some institution whose duty it is to accumulate such a reserve against lean years—‘a drought reserve’ as it has been appropriately called in Australian discussions. But given a fixed exchange rate, there is no advantage in having a central bank to do it, *unless the central bank can ‘sterilize’ the foreign exchange movements by reducing its*

¹ Since 1929 these countries have become very conscious of the disadvantages of borrowing abroad up to the hilt in good times. The Australian Federal Loan Council, for example, prevents borrowing abroad from exaggerating the fluctuations in the balance of trade in the traditional manner. There is obviously scope for some such special institution to work in close co-operation with the central bank, and the development of international channels for lending (e.g. the International Bank for Reconstruction and Development) has encouraged borrowing countries to organize their external borrowing more deliberately.

other assets as gold or foreign exchange flows in, and vice versa. We are forced to the conclusion that, far from thinking of the central bank as being able to manipulate the cash basis by regulating its dealings in gold and foreign exchange, pursuit of its foreign-exchange policy necessitates manipulation of its *other* assets.

Unfortunately, we have already examined those other assets and found that the power of the central bank to vary them is likely in practice to be extremely restricted. We may now see how in time of prosperity it cannot be expected that the commercial banks will naturally be in debt to the central bank: for the favourable balance of payments will have led to the central bank absorbing foreign exchange, and the currency created in exchange will be used by the commercial banks to pay off their indebtedness to the central bank. Control of the situation by the central bank appears to be dependent on its power to *offset* foreign-exchange movements, and the possibility of doing so by open-market operations in the least analogous to the Anglo-American operations appears to be very slight.

What, then, is the use of a central bank? I believe that two important possibilities remain open even when a fixed exchange rate is being maintained; and when the exchange rate is not stabilized there is a further argument in support of the utility of a central bank. We have so far concerned ourselves purely with the possibility (but difficulty) of the central bank controlling the cash basis by open-market operations of one kind or another. There remains open the possibility of securing a change in the composition of its liabilities. I am suggesting in fact that the central bank should be allowed to take advantage of its position as banker to the Government. If it cannot reduce its domestic assets when foreign exchange is flowing in (or when for any reason it wants to contract the cash basis) it can restrict (or reduce) the cash basis by raising Public Deposits—the Government's balance. Government disbursements must fall short of government receipts. This cannot, of

course, be done by the central bank on its own initiative—a serious limitation of its power. But it can be done with the co-operation of the Government—hence another argument for very close co-operation of the central bank and the Treasury.

It must be emphasized that these variations in Public Deposits must, if they are to be of any use, be produced by revenue surpluses and deficits and not by government debt operations. For if the Government can raise the level of Public Deposits by issuing securities to the public there is no reason why the central bank should not itself sell part of its holding of government securities to the public—the absorptive capacity of the securities market is the same either way. And contrariwise for a reduction of Public Deposits by redeeming securities. If the public's holding of securities is subject to variability it is better that the central bank should take direct advantage without dependence on the goodwill of the Treasury. We have already suggested that ordinarily the variability of public security holdings is not great. The possibility I am suggesting entails not government debt manipulations but deficiteering and its opposite. And this is worth noticing for another reason: a government deficit makes for inflationary conditions, and a surplus for deflationary conditions, directly.¹ A time when the central bank is striving to check inflation (and therefore when an increase in Public Deposits is most useful to it) is just the time when a government surplus is most helpful to it. And similarly, when the central bank wants to check deflation a fall in Public Deposits and the appearance of a government deficit are both useful.

Yet in spite of all these difficulties in the way of manipulating total assets or the composition of liabilities, there

¹ If there is a government deficit, government demand for goods and services is likely to exceed the reduction in private demand enforced by taxation—total demand (government plus private) therefore tends to be excessive, i.e. inflationary. Correspondingly, a government surplus tends, by the excess of taxation over government demand, to a reduction of total demand.

remains one way in which the central bank can exercise authority. It can be given power, as has happened in many countries, to vary the ratios of the commercial banks' compulsory cash reserves to their deposit liabilities. The aggregate supply of money can be insulated from a rise in the cash basis by an appropriate rise in the legal ratios; and from a fall in the cash basis by an appropriate reduction of the legal ratios.¹ Save for its effect on the profitability of commercial banking (and its influence should generally tend to stabilize profits and so be acceptable) there is no possible objection to this course. It is accordingly a weapon which should always be placed in the hands of a central bank whose technique is circumscribed by the conditions we are assuming in this section. Given such power the central bank can perform useful functions that commercial banks cannot be expected to perform.

All this is equally applicable whether or not a fixed foreign-exchange rate is maintained. But if the country without a central bank does not maintain a fixed exchange rate the establishment of some special institution which would have some functions appropriate to a central bank is likely to come sooner or later. For in the absence of any such institution the commercial banks will normally, for the conduct of their own business, hold reserves of gold and/or foreign exchange and they will generally be the main dealers in the foreign-exchange market. But sooner or later the Government, acting supposedly in the interests of business activity, is bound to take an interest in the foreign-exchange situation and to seek eventually to regulate the foreign-exchange rates. This cannot be done

¹ This assumes that the commercial banks do not normally vary their cash ratios. In the absence of a short-money market and a lender of last resort, banks in these countries have been used to seeing their cash ratios fluctuate widely; the establishment of the central bank as a lender of last resort should, in course of time, encourage banks to run down their local cash to a minimum; and if the central bank is given power to requisition the foreign assets of the commercial banks, its control is reasonably strong.

properly without the co-operation of the commercial banks, and the latter may reasonably object to altering the foreign-exchange rate at which they will deal in such a way as to impose great losses on themselves. The Government, or a newly adapted institution, must then be prepared to step in and take over all foreign-exchange reserves and take the entire responsibility for fixing the rate. This is what happened in New Zealand, for example, in the early nineteen-thirties, and events in Australia were much the same. Once this is realized the case for putting this rather specialized function of regulating the foreign exchanges into the hands of a central bank becomes much clearer. When the country does not maintain a fixed exchange rate the case for establishing a central bank may be based partly on this desirability of having some institution to regulate the foreign-exchange value of the currency—always assuming that the authorities are unwilling to leave the foreign-exchange market completely exposed to every wind that blows.

The central bank may also have important ancillary functions, as the tool of foreign-exchange policy and adviser on that policy, advising the Government on the economic effects of its financial policy, and co-operating in the regulation of the import and export of long-term capital. These functions can be more effectively exercised if the central bank is governed by men who can use the arts of persuasion. Persuasion can also help more directly, through the commercial banks. The central bank can influence the economic situation by operation on the rate of interest; but this influence works slowly and often but feebly. In the countries to which we are referring in this chapter a succession of good export seasons sets up powerful influences promoting inflationary developments—incomes of export producers rise and all too frequently a feeling of increased prosperity and confidence leads to a new generosity in government expenditure. In such an atmosphere the central bank can exercise a useful restraint

if it can persuade the commercial banks to be exceptionally critical in their views of loan applications; this may have much more influence than any raising of interest rates. More effective still would be action in raising the foreign-exchange value of the currency, which would moderate the rise in incomes (in terms of home currency) of export producers. Manipulation of government taxation and expenditure can exert much influence. The inflationary pressure can be moderated by checking any inflow of capital.¹ To forward these ends should be an important object of the central bank; and similarly it should strive for contrary developments as extremely important supplements to the expansive policy it should follow at other times, when extraneous causes have set up a deflationary movement.

For these reasons it is important that these countries should not be satisfied with the mere establishment of central banks on the (somewhat inappropriate) English or American pattern. They should endow their central banks with appropriate powers (especially the power to vary cash ratios) to control the supply of money. But they should go on to establish a network of machinery for monetary control—a network including the central bank as regulator of the supply of credit and of the foreign exchanges, a body for the regulation of overseas borrowing, and a Treasury which pays regard to the general economic effects of budget policy. Australia and Canada have gone farthest along this road; others have still far to go. The connexion of budget policy directly with the whole field of government activities, and the connexion of the other functions mentioned above with the general welfare of the people, make it impossible to foresee successful establishment of such monetary control without there arising all sorts of constitutional questions about their mutual relations and their subjection to popular control. The solution of these constitutional questions must be contributed by the coming political

¹ This is a weighty reason against dependence on raising interest rates.

generation if the theories of the economists are to be exploited to the full in these countries.

III. *Central Banking in an Undeveloped Banking System*

In the previous section we were concerned with the peculiar problems facing central banks where there is a good system of commercial banking but no good short-money market. We now proceed to the central-banking problems peculiar to those countries which have no well-developed network of commercial banks. Much of what was said in the previous section, and especially the last part, is applicable also to these more primitive countries. Indeed, much of the last part is applicable to all countries. But for the less-developed countries—colonial territories and many Latin American countries, for example—there are certain further considerations to which we now turn. The essential peculiarity distinguishing these countries from those already discussed is that they approach the extreme case of a central bank that has no banking system to control. There may be overseas ('expatriate') banks handling large transactions in a few ports and major trading centres, but the business of the interior is scarcely touched by these banks and the supply of money is composed mainly of cash.

In these circumstances the influence of the central bank in the foreign-exchange market is likely at first to be its most important function, for there alone will it be able to influence the supply of money. But there are other important ways in which the central bank can meet the peculiar conditions. It can *provide or supplement* the ordinary banking facilities of the country. Or it can merely encourage the development of an integrated commercial-banking system. In exceptionally favourable conditions it may manage both to supplement existing commercial banking and to encourage its independent development. Provision of ordinary banking facilities and encouragement of the growth of an integrated commercial-banking system

should, however, generally be regarded as alternative policies. For while the first has as its end a system in which the central bank has *direct* control over the supply of bank money (since all, or a substantial part of all, bank deposits are its own liabilities), the aim of the second alternative is the development of a system in which the central bank has only the indirect control which control of the cash basis gives.

Against a central-bank policy of providing ordinary banking facilities is all the force of the opinion that the central bank should leave ordinary commercial-banking business to separate institutions. But this notion is always supported by arguments which assume that there are already in existence commercial banks covering at least a large part of the field. There is, for instance, the argument that, as the commercial banks are obliged to keep balances at the central bank without earning interest on those balances, the central bank should not compete as a lender of funds with ordinary banks which have to go to some expense to obtain deposits. Such competition, if it is even suspected, is at once dubbed 'unfair competition'.¹ There is also the argument that, when the central bank acts as an ordinary banker to the public, transfers of money from a commercial-bank's customer to a central-bank's customer (or vice versa) disturb the supply of money. These arguments collapse entirely if there is no commercial bank in existence; and lose most of their force if the commercial banks cover only an insignificant part of the total field. But the former of these two arguments does imply a further proposition: that the development of independent commercial banking may be discouraged by central-bank invasion of the field. If, therefore, we have any reason for preferring ordinary commercial banks, the central bank should encourage their growth rather than invade the field

¹ If the central bank alienates the commercial banks in this way (or, for that matter, in any other way), its use of the 'weapon' of persuasion will have small success.

itself. The issue turns in fact on the question of the integration of banking systems.

In favour of complete integration of the banking system there is the very powerful argument that in an integrated system control over all banking operations is direct and not indirect. The force of the argument depends on the inefficiency of indirect as compared with direct control. If we could assume that the commercial banks would always react automatically in precisely the right way to any central-bank action, indirect control would be as good as direct control. But as has been seen at several points early in this book, no amount of regulation of commercial banking can guarantee invariably correct reaction. Even if they cannot lower the cash-ratio below a legal minimum, the commercial banks can always raise it above that minimum and thereafter reduce it to that minimum. Central-banking policy may sometimes require the commercial banks to expand (or contract) earning assets of one kind rather than another; but the system of indirect control does nothing to provide for such situations. London appears, since 1890 at any rate, to have learned that some of these deficiencies of indirect control can be overcome by informal co-operation between the various members of the system. Much has still to be done along this line: especially where, as in London, the central bank is so secretive. But obviously the further co-operation is developed the nearer does the system approach a formally integrated system. The great disadvantage of an integrated system is that the one bank, being conscious of its sole ultimate responsibility, may be too cautious to provide all the bank loan facilities which would be provided by specialist commercial banks. It may well be that the most efficient system is one in which ordinary business for the public is undertaken by other banks, while these banks and other financial institutions are themselves customers of, and closely dependent upon, the central bank.

There remains the question of what a central bank can

do to encourage the development of a system of commercial banks. Here the possibilities are two. The first and much the more attractive course is provision and encouragement of the use of rediscounting facilities. The second and more remote possibility is the administration by the central bank of a subsidy for newly established commercial banks.

The development of rediscounting is important in a new banking system in that it enables banks to economize their till money without increasing the risk of being broken by a 'run' for cash. Since cash is a non-earning asset, economizing cash reserves implies increasing earning power. Growth of rediscounting facilities therefore acts in the same way as a subsidy; but it has the additional advantage of developing contacts between the various parts of the banking system and making it easier for the central bank to enforce its policy. The central bank can do much in this way by selecting (and possibly securing the adaptation of) any suitable credit instrument already in use in the country (the *hundi* in India is an example), and offering favourable rates for cash obtainable on deposit of these instruments with itself. Sometimes there is room for reduction of stamp duties on such instruments, and then the central bank should do its best to persuade the Government to sacrifice revenue for the sake of promoting the development of the banking system. In the new dominions, too, the central bank must be prepared to open numerous branches (or attractive agencies) in order to provide assistance quickly and easily to new local banks. Unfortunately there is almost universal prejudice against rediscounting, as it was generally regarded as a sign of weakness. The central bank should make it its business to persuade bankers that rediscounting is not necessarily an evil practice.¹

¹ If bills of exchange or some analogous instruments are not in use, rediscount facilities are, of course, pointless. For this reason new central banks have sometimes (notably in South Africa) attempted to encourage the use of bills, but such attempts have met with little success.

If the Government is willing to bear the expense the outright subsidy method may be employed. If so, the central bank is the obvious agent for administration of the subsidy: for compulsory inspection powers would be a decided advantage in developing its contacts with newly established banks. It might be difficult to discriminate between new banks and those already well established without encouraging the growth of a unit-banking system rather than a branch-banking system; but I believe this difficulty could be overcome. However, detailed discussion of this possibility seems rather a waste of time when we remember that in the countries of which we are thinking there are generally many more pressing needs to be met out of the scant government funds. All that the Government can reasonably be expected to do is to reduce stamp duties on particular credit instruments, at the suggestion of the central bank.

But I believe that much can be done without great expense if the central bank makes up its mind to encourage the growth of commercial banking; and once an adequate system of commercial banking has developed the problems of control faced by the central banks become those which we have already discussed. If progress is to be real, it must be based on a thorough understanding of the problems rather than on a slavish imitation of what has been done in the countries whose financial institutions happened to develop first. In the inter-war period a number of factors conspired to make some of the 'new' countries rush into the establishment of central banks, and only gradually are they beginning to realize how essentially different are the financial climates in which these new institutions are functioning. The 'new' countries alone cannot be held responsible for their misunderstandings: they often took British and American advice based more on familiarity with the City and Wall Street than on fundamental analysis of banking problems. Since then we have both lived and learned.

THE RADCLIFFE REPORT

SINCE the fourth edition of this book went to the printer in April 1957 the monetary system has been the subject of inquiry, the first since that by the Macmillan Committee in 1929-31, by an independent body appointed by the Chancellor of the Exchequer. The then Chancellor of the Exchequer, Mr. Peter Thorneycroft, in his Budget speech in April 1957, announced the Government's decision to appoint a committee under the Chairmanship of Lord Radcliffe; the Committee began its work in May 1957 and reported in July 1959. Its *Report, Minutes, and Memoranda of Evidence* contain fuller details of the monetary system than any account hitherto available.

The terms of reference given to the Committee were 'to inquire into the working of the monetary and credit system and to make recommendations'; hence its official description as the 'Committee on the Working of the Monetary System', though like other such bodies it is commonly referred to, after its Chairman, as the Radcliffe Committee. Its membership was smaller than that of the Macmillan Committee, but was constituted on similar lines: in addition to the Chairman, there were two bankers (one a clearing-bank chairman, and the other a partner in a merchant bank), two industrialists, two from the trade union movement, and two academic economists. Of the nine, nearly all had previous experience on government committees of inquiry, four of them having been chairmen of such committees. Nearly all had inside experience of the machinery of government, and most had inside experience of the business world. The Report of the Committee, unlike the Macmillan Report, was unanimous.

When the Committee was appointed in the spring of 1957 the boom in the United Kingdom, the United States, Europe, and the world generally was at its height. Inflation in most countries was proceeding at an uncomfortable speed, and seemed to many people to be getting out of control. The previous years had in the United Kingdom been a period of experimentation in monetary policy, not conspicuously successful: indeed, the question-marks raised had been among the circumstances leading to the appointment of the Radcliffe Committee. Much of the early evidence—particularly the written evidence of financial institutions, largely prepared in the second half of 1957—was coloured by the atmosphere of boom, inflation, and monetary experiment. Before the Committee's investigations had gone very far, however, the scene changed radically. Almost simultaneously the world-wide boom began to give way to more difficult trading conditions, and a foreign exchange crisis caused the British authorities to adopt more extreme measures than any taken in the earlier years. By the end of 1957 the exchange crisis was past and the world recession was developing rapidly, and during 1958 the various restrictive measures—not only those of September 1957 but also the earlier measures—were gradually relaxed. As recession deepened in the winter of 1958–9, the relaxatory measures were succeeded by a positively stimulating Budget in April 1959. When controls on them were relaxed, the banks leapt into new developments with an eagerness that could not have been inferred from previous statements; and the monetary authorities themselves showed that they also were ready to consider new ways. The Committee was thus able to watch the behaviour of the monetary system under some variety of conditions, and much of the evidence given to it has to be related with some care to the precise phase in which it was prepared and given to the Committee.

The purpose of the following paragraphs is not to

summarize the Radcliffe Report—it defies summary—but to give the reader some indication of what can be found in it and in the related volumes of evidence.

The Report itself has an introduction and twelve chapters. Chapter I, 'The background to post-war monetary policy', outlines the economic circumstances in which monetary policy is required to operate, emphasizing the contrasts with the conditions ruling when the Macmillan Committee conducted its similar inquiry thirty years ago. It points to the high level of employment, rapid economic growth, and persistently rising prices as phenomena characterizing the post-war period, not only in Britain but in the world generally. The world-wide shortage of capital, in which Britain has fully shared, has underlain these conditions. In spite of strong overseas demand for British goods and the tremendous growth of Britain's export capacity to meet these demands, the British balance of payments has remained precarious. The possibilities of monetary action have been affected by the war's legacy of financial liquidity, the growth of the Budget, and of the public sector in relation to total national resources.

Chapter II, 'The objectives of monetary policy', deals with the reshaping of ideas about what monetary action is expected to achieve. It shows how the objectives of government economic policy have become more complex and how there has ceased to be any clear priority among the objectives. Like the first, this second chapter starts from a comparison with the Macmillan Committee's world, but its main argument is based on an examination of current opinions.

Chapters III, IV, and V are devoted to a descriptive analysis of current financial institutions. The existence of Chapter III, 'The financing of the public sector', reflects the importance, in the working of the monetary system, of the financial operations of all the various governmental bodies, including the local authorities and the nationalized industries as well as the organs of central government. Chapter IV correspondingly describes 'Financial

institutions in the private sector'. Here the Committee surveys the main groups whose behaviour can be expected to have appreciable influence on the facility with which, and the terms upon which, people can obtain finance, and the main channels through which finance passes from lenders to borrowers. The groups covered are the London clearing banks, Scottish banks, discount houses, accepting houses, overseas banks, hire purchase finance houses, insurance companies, superannuation and pension funds, investment trusts, unit trusts and building societies; and there is some more general account of bill finance, the new issue market and trade credit. Some important general impressions are given in paragraphs 312-19. The survey is not comprehensive, but concentrates on those aspects of the activities of these institutions which are most directly relevant to the liquidity position of the economy. The chapter is based mainly on the Memoranda of Evidence submitted by the various groups, as elucidated in their oral evidence; this evidence was in many cases supplemented by statistical material prepared at the request of the Committee.

Chapter V, 'The work of the Bank of England', shows how the Bank operates as the financial link between the public sector and the private sector. It divides the Bank's business into the external (tasks in relation to transactions between the United Kingdom and the outside world) and the domestic (relating to transactions in sterling, mainly between the Government and the banks). The chapter concludes with an analysis of the technical means by which the Bank of England operates on conditions directly affecting the state of industry and trade; it emphasizes the crucial importance of the Bank's work as manager of the National Debt, showing how this activity gives the Bank influence on the structure of interest rates and the liquidity of the private sector. The chapter is a more complete and systematic account of the work of the Bank of England than any previously available; never before had the Bank of England submitted itself to such close examination.

Having surveyed existing institutions, both public and private, the Report turns, in Chapters VI, VII, and VIII to the questions of policy. Chapter VI, 'The influence of monetary measures', opens with a statement of the Committee's reasons, deriving from the evidence it received, for concluding that it is the liquidity of the economy, rather than the supply of money, that the authorities should seek to affect in their efforts to influence the pressure of total demand. There follows a history of the period of experiment (i.e. from 1951 onwards) and a discussion of the effects of monetary measures during this period. Its conclusions about experience with the various measures are discussed in paragraphs 437-54 (interest rates), 455-60 (the credit squeeze), 461-3 (capital-issues control), 464-8 (hire-purchase control), and more generally in 469-73. The Committee then considers how far it is reasonable to expect the most relevant circumstances to remain in the nineteen-sixties as they have been in the nineteen-fifties: there is particular reference to the scarcity of capital, and to the liquidity of companies and persons.

The remainder of Chapter VI gives the Committee's views on the scope for monetary measures in the nineteen-sixties. Interest rates (488-503), control of bank-liquidity ratios (504-8), capital-issues control (512), and hire-purchase controls (513) are considered in the context of the normal ups and downs of trade; a more general discussion of the part to be played by monetary measures in these circumstances is to be found in 514-19. The Committee's discouraging conclusions on the efficacy of such measures are likely to be much debated; the Report itself points to the need for further and continuous investigation on many of the questions arising.

The concluding section of Chapter VI (520-9) deals with the rather different question of what should be done if the economy threatens to get completely out of hand; it proposes resort, as temporary measures in such an emergency, to a combination of drastic controls of bank advances, capital

issues, and consumer credit. Incidentally to this discussion of emergency measures, the Committee examines (in 522-4) the possibility of finding some statutory restriction to replace the traditional (1844) restriction of the note issue. At an earlier point (509-11) the Committee envisages the possibility that there may be periods, not amounting to emergencies, when particular circumstances of an intractable kind would cripple normal measures, and suggests that widespread direct control of lending institutions might then become necessary.

Chapter VII takes up, in the light of the general views developed in Chapter VI, the problems of the management of the National Debt, already foreshadowed in the closing section of Chapter V. It includes (536-41) an entirely new statistical analysis of the debt—admittedly not by any means a satisfying analysis, but more comprehensive than anything previously possible. It reviews (542-8) the demand for the debt, and (549-56) the practice of the authorities in the post-war period. The principles that have actuated, and should actuate, the authorities are discussed at length; there is some discussion of the factors that influence bond yields (557-77). The technical arrangements for the issue of bills and bonds, and for open-market operations in both bills and bonds, are examined (578-90). The chapter also includes some discussion of the problems of raising capital for the nationalized industries (591-5) and the local authorities (601-2). Throughout the chapter runs the thought that management of the debt is the most fundamental task of the central bank, and that what it does in this field must be clearly integrated with other parts of the Government's economic policy.

Throughout its review of events in the nineteen-fifties the Committee was compelled to notice the important part played by external events and their influence on the monetary measures adopted. The Committee therefore found it necessary to examine this influence and the international setting in which British monetary policy has to operate;

this is the subject of Chapter VIII of the Report. The Chapter shows that the external aims of policy cannot be dismissed in a simple sentence or two. Instead, the Committee regarded Britain as having both duties and aspirations as a member of an international community in the widest sense; the complexity of this chapter reflects the complexity of this international position of Britain. The chapter reviews Britain's reserves and liabilities, and shows that the repeated exchange crises have not been due to any failure of Britain to pay her way but to the volatility of certain elements in the balance of payments and the lack of reserves (612-33). The sources of pressure on the reserves are examined in detail (634-43). An explanation of the Sterling Area (644-56) is followed by some discussion of its future (657-63). In a discussion of the problem of international liquidity (664-90) the Committee looks to the development of international institutions, rather than to any unilateral action, as the most satisfactory way of tackling the problems of international balance. The means by which, given the international setting, the authorities may counter pressure on the reserves are reviewed (691-747) with particular reference to Bank Rate (695-702), the forward exchange rate (703-7), devaluation and floating exchange rates (708-22), administrative controls (723-30) and the control of overseas investment (731-47).

Having reviewed the problems of policy and considered how the authorities should act, the Committee turns to the question how far the constitutional arrangements are appropriate to the requirements of policy. Chapter IX, 'The organization and status of the Bank of England', is thus to be read in conjunction not only with Chapter V but also with the central policy chapters of the Report (VI, VII, and VIII). The chapter describes the present position, especially with reference to the relations between the Bank and the other organs of government. It discusses some aspects of the nationalizing Act of 1946, in the light of experience. It examines the functions of the Court of

Directors, having regard to the questions raised by the (Parker) Tribunal which inquired in 1957 into 'Allegations of Improper Disclosure of Information relating to the Raising of the Bank Rate'. On these constitutional matters the Committee recommended no substantial change, but it did recommend that appearances should conform more closely with the substance of current practice.

Chapter X, 'Statistics', reviews available statistics and their adequacy for monetary policy. It points out that for purposes of monetary policy statistics are needed covering much and more than financial business. It notes the recent advances in economic statistics generally, and that financial statistics have shared very little in this development. It takes the view that a special responsibility rests on the central bank in the gathering and publication of statistics. Throughout the chapter the Committee has assumed that monetary policy ought not to be authoritarian, but should be based on an informed opinion exercising independent critical judgement, and that the authorities should therefore publish as fully as possible the information on which their actions are based.

In Chapter XI, 'The development of monetary institutions', the Committee considers five subjects where questions of reform or adaptation seemed to arise from the evidence. They are the finance of exports (867-98), the finance of agriculture (899-931), the finance of small businesses and industrial innovation (932-52), the giro system for payments (953-64), and the control of capital issues (965-77).

The conclusion, Chapter XII, is a very brief statement of the main ideas that the Committee felt emerged from its study of the monetary system.

In addition to the Report, the volume of *Minutes of Evidence* and the three volumes of *Memoranda of Evidence* are important sources of information. The majority of witnesses who appeared before the Committee had pre-

viously sent in memoranda; many of the questions asked referred to specific passages in the memoranda. The reader consulting these volumes should therefore read first any memorandum submitted by a witness, and should keep this memorandum before him while reading the oral evidence. This is particularly important when studying evidence by the Treasury and the Bank of England.

The oral evidence by the Treasury and Bank of England is to be found mostly in the First to Thirteenth Days, and the Fifteenth Day, but the important further evidence given on the Thirty-eighth, Fifty-first, and Fifty-ninth Days should not be overlooked.

The Committee of London Clearing Bankers gave evidence on the Sixteenth, Seventeenth, and Fifty-seventh Days, and the Scottish banks on the Twentieth Day. Other financial institutions in the private sector gave evidence on the Sixteenth, Eighteenth, Nineteenth, Twenty-first, Twenty-third, and Twenty-eighth to Thirty-first Days.

Three central bankers from other countries gave oral evidence: Mr. M. H. de Kock, Governor of the South African Reserve Bank (Thirty-sixth Day); Mr. Winfield W. Rieffler, Assistant to the Chairman of the Board of Governors of the Federal Reserve System (Thirty-seventh and Thirty-ninth Days); and Dr. M. W. Holtrop, President of the Netherlands Bank (Fiftieth Day). Their memoranda and those from certain other central banks are to be found in Volume I, Part V. This part of the evidence is of great value to students, as the witnesses named expressed views of central banking sharply different from those eventually adopted by the Committee and developed in the Report. The Committee found that vital assumptions made by these witnesses did not fit British conditions; their relevance to conditions in some other countries is not questioned.

A comprehensive review of the adequacy and timeliness of published statistics was prepared at the Committee's

request by the National Institute of Economic and Social Research, and this appears as Part XII in Volume 3 of the *Memoranda*.

APPENDIX

THE LONDON BANKERS' CLEARING HOUSE

[The following description was prepared by officers of 'The Three Banks' with the co-operation of officers of the Clearing House. It is based on an article which appeared in the 'Three Banks Review', June 1954, but has been revised for the present purpose. We acknowledge with gratitude the courtesy of the Three Banks and of the Clearing House officials in preparing, and allowing publication of, this authoritative description.]

THERE are eleven clearing banks, viz. Barclays, Lloyds, Midland, National Provincial, Westminster, Coutts, District, Glyn Mills, Martins, National, and Williams, Deacon's, and to these must be added the Bank of England which is an *ex officio* member, in whose books, as has been said, the eleven clearing banks keep an account for the purpose of settling daily claims on each other and, of course, on the Bank of England. Clerks of the clearing banks meet daily at agreed times in the Clearing House to exchange claims. The Clearing House is in Lombard Street, and is controlled by the 'Committee of London Clearing Bankers' on which each clearing bank is represented, usually by its Chairman. Meetings are held each month, and once a quarter the meeting is held at the Bank of England, on which occasions the Governor and Deputy Governor of the Bank of England attend. The management of the Clearing House is delegated by the Committee to a Chief Inspector and a Deputy Inspector who are responsible for the day-to-day working.

The Clearing House deals with cheques paid into a branch of one clearing bank which are payable at a branch of another clearing bank, and the work is split geographically, depending upon the site of the office or branch of the clearing bank. Before the war there used to be three divisions—a Town Clearing, a Metropolitan Clearing, and a Country Clearing. The Town Clearing consisted of about 120 offices or branches in an area which extended roughly from Finsbury Circus to Southwark, and from St. Paul's Churchyard to Minories. The Metropolitan Clearing covered 670 branches in the London area beyond the Town Clearing boundary, while

the Country Clearing covered the rest of England and Wales. There were also arrangements for dealing with other types of cheques:

- (a) cheques paid in at one branch of a clearing bank and payable at another branch of the same clearing bank;
- (b) cheques payable in Scotland or Ireland;
- (c) cheques payable at London offices or branches of banks which are not members of the Clearing House; such as Overseas and Foreign Banks and Merchant Banking Houses. These are known as 'Walks';
- (d) cheques paid in at a branch of one clearing bank payable at a branch of another clearing bank, where both branches are in an area where provincial or local clearing arrangements are established, i.e. a cheque paid in to Midland Bank, Leeds, and payable at Barclays Bank, Leeds.
- (e) There were also, of course, special collection arrangements for collecting Government Department drafts, e.g. Paymaster General, Inland Revenue, and G.P.O., as well as the many thousands of Bank of England interest warrants.

The procedure for dealing with these types of cheques will be described later.

At the beginning of the war certain changes were made in the division of the work. The size of the Town Clearing area was reduced to some thirty-three offices, and the Metropolitan and Country Clearings were abolished; a new General Clearing being introduced which covered the whole of England and Wales outside the new Town Clearing area. During the war the Town Clearing was handled in London and the General Clearing at a Clearing House established at Trentham Gardens, near Stoke-on-Trent. Since the end of the war the Town Clearing area has been again increased and now includes eighty-two offices and covers an area between London Wall and the North bank of the Thames, and between Queen Street and Mark Lane, the area of the main City markets. The General Clearing has been moved back to London so that both Town and General Clearings are now handled in Lombard Street. The war-time division of work has, however, been retained.

Each cheque-book issued by a clearing bank contains aids to sorting and identification; most cheques have printed in the bottom

left-hand corner one of three letters—'T', 'M', or 'C'. All offices and branches which were in the pre-war Town Clearing issue cheques printed with the letter 'T'; branches in the former Metropolitan Clearing the letter 'M'; branches in the Country Clearing the letter 'C'. In addition every cheque has printed in the top right-hand corner its 'National Number', as a means of identifying the office or branch. Each number is different; offices in the pre-war Town Clearing area have a three-figure number, branches in the Metropolitan Clearing a four-figure number, and in the Country Clearing a five-figure number. A simple code assists identification yet further; the national numbers of branches of any one of the 'Big Five' all begin with the same number. For instance, national numbers of Barclays Bank branches begin with the figure '2', Lloyds with the figure '3', and so on alphabetically to the Westminster with the figure '6'. In the case of the other clearing banks the national numbers all begin with the figure '1', and the second digit is the identifying one. The national numbers of branches of Glyn Mills, for instance, all begin '15', and of Williams, Deacon's with the figure '16'. All cheques collected through the Walks system (already referred to) have a national number beginning with the figure '7'. As these numbers were allotted some years ago banking changes have led to a few exceptions to the standard rule. Thus the District Bank has numbers beginning '70', while certain branches of Barclays Bank in the Manchester area have numbers beginning '72', and the Yorkshire Penny Bank '73'. The cheques of several of the banks are printed with a further code number to facilitate sorting within Head Offices to drawee branches.

This identification system has not been modified to meet the war-time division of work which still operates in the Clearing House, i.e. a Town Clearing and a General Clearing. The reason, presumably, is that it is not felt that the position has crystallized sufficiently. For instance, when the Metal Market was reopened, a branch of one of the Big Five (where much of the Metal Market business was handled), which had been in the Town Clearing before the war and was transferred to the General Clearing in 1939, was once again brought back into the Town Clearing in order to make available to that branch the speedier clearing facilities of the Town Clearing. However, apart from the anomaly that a few branches previously in the Town and now in the General Clearing still issue cheques marked with a 'T', the pre-war system

of identification still works satisfactorily enough in the present organization.

Before describing in detail the mechanism of the Town and General Clearings it will be necessary to define four phrases which will recur in what follows. The 'Out Clearing' or 'Out Charge' of any one clearing bank represents cheques which have been paid into branches of that clearing bank and fall to be paid by the other clearing banks. It represents the *claims* of that clearing bank on the other clearing banks. The 'In Clearing' or 'In Charge' is the cheques drawn on the branches of any one clearing bank and presented to it by the other clearing banks. A 'Collecting Banker' is a bank who is presenting a cheque to another bank for payment. A 'Paying Banker' is a bank who pays a cheque presented to it for payment by another banker. Thus a cheque drawn on a branch of Barclays Bank paid in to a branch of Williams, Deacons' for the credit of an account there will be included in Williams, Deacon's 'Out Charge' to Barclays, and Barclays 'In Charge' from Williams, Deacon's. Williams, Deacon's would be the 'Collecting Banker' and Barclays the 'Paying Banker'.

It will also be appropriate at this point to make clear an important difference between the pre-war and the present practice in respect of the 'Out Clearing'. Before the war the 'Out Clearing' was collected through the clearing in which the paying branch was situated. That is to say that any branch, wherever situated, would each day be collecting cheques via its Head Office through the Town Clearing, the Metropolitan Clearing, and the Country Clearing. This is no longer so. A branch in the General Clearing now collects the cheques paid into it only through the General Clearing, irrespective of whether those cheques are payable at a branch situated in the Town or General Clearing area. A branch in the Town Clearing, however, still sorts its 'Out' charge into categories depending upon where the cheques are payable. A cheque payable at another branch in the Town Clearing will be collected through the Town Clearing. A cheque payable at a branch in the General Clearing will be collected through the General Clearing.

Let us now follow through the clearing a cheque paid into a branch in the General Clearing area. Let us assume that a customer of Williams, Deacon's, Matlock, pays in to his account on a Monday a cheque payable at Barclays Bank, Cromer (also a branch in the General Clearing). For purposes of identification the

cheque is first stamped across the face with the name and address of the branch into which it was paid, i.e. Williams, Deacon's, Matlock. This is, of course, also a protection in that once a cheque is crossed specially by the collecting bank, it cannot, if lost in transit for instance, be paid to another bank. It is then sorted in with all the other cheques drawn on branches of Barclays, irrespective of whether the paying branch is in the Town or General Clearing. These cheques are then listed and totalled, and together with a covering list or 'Docket' (which shows the amount of each cheque together with the total of cheques drawn on branches of Barclays) are sent by post to Williams, Deacon's London Office, arriving on Tuesday morning. (It is almost universal practice now to list only the amounts of the cheques and not the drawee branch numbers. The N.P. Bank does list drawee branch numbers, however.) Here the Barclays Bank General Clearing Dockets received that morning from all branches of Williams are amalgamated and a total arrived at by summarizing the dockets. A Williams clerk then takes the cheques, dockets, and summary to the Clearing House and hands them over to a Barclays Bank clerk. This must be done by 10.15 on Tuesday morning. (It is at this point that the Williams 'Out Charge' on Barclays become the Barclays 'In Charge' from Williams.) The Barclays clerk takes the cheques back to his Head Office where the individual cheques are again listed by amounts and totalled on an adding machine, thus verifying the correctness of Williams' claim. The cheques are then re-sorted according to the branch of Barclays where they are payable. They are next either listed, or passed through a photographing machine, before dispatch by post on Tuesday evening to the branches where they are payable. Thus Barclays, Cromer, will receive on Wednesday morning the cheque which was paid into Williams, Matlock, on Monday morning and, assuming the cheque is in order, will debit their customer's account on Wednesday. Williams will also be paid for the cheque on Wednesday in the Clearing House settlement. All the above is subject to postal delays and deferred clearing arrangements such as operate, for instance, on Saturdays.

The collecting banker, however, is not entitled to assume that such a cheque is paid until Thursday has passed because it may have been returned unpaid.

If by any chance the cheque is unpaid, it will be sent by post on Wednesday direct from Barclays, Cromer, to Williams, Matlock,

with the reason for non-payment written on the cheque. On the same day Barclays, Cromer, will include a claim slip in the Williams section of their 'Out' charge, by which the amount of the cheque will be claimed back by Barclays from Williams in the General Clearing.

The procedure for cheques paid into an office or branch of a clearing bank situated in the Town Clearing area is somewhat different. They are sorted not only according to Paying Bank but also according to whether the branch of the paying bank is situated in the General or Town Clearing area. Cheques payable at branches in the General Clearing area are collected in the way already described. Cheques payable at branches in the Town Clearing area are passed through the Town Clearing, of which there are two daily. Between 9 a.m. and 9.30 a.m. (9 a.m. and 9.15 a.m. on Saturdays) are exchanged cheques, consisting mainly of items under £500, drawn on branches in the Town Clearing paid in the previous day. The afternoon clearing between 2.30 and 3.40 (11.20 a.m. and 12 noon on Saturdays) is restricted to cheques for £500 and upwards together with due bills of any amount which have been paid in that day. The morning totals are carried forward, so that at the conclusion of the afternoon clearing, settlement is made for the whole day's work. In the case of the afternoon clearing the various 'In' charges are listed, agreed, and sorted into branches at the Clearing House so that each branch can receive its cheques in time for any unpaid items to be returned to the House in time for the final settlement.

The settlement for any given day—say a Wednesday—will therefore consist of the following items:

1. the morning Town Clearing for Wednesday, consisting mainly of cheques under £500 which will have been received at the collecting banks on Tuesday;
2. the afternoon Town Clearing for Wednesday, consisting of cheques of £500 and upwards;
3. the General Clearing for 10.15 a.m. on Tuesday. The cheques contained in this settlement will have been despatched from branches of banks all over the country on Monday.

Settlement of Saturday's clearing (i.e. Friday's lodgements at branches) is not now effected until Tuesday, and Saturday's

lodgements at branches are combined with Monday's and presented on Tuesday.

It will be seen therefore that the Town Clearing enables the collecting bank to receive settlement for its claims more quickly than in the case of the General Clearing. As a result of this overall settlement the balance due to or owing by each bank will be struck and the appropriate transfer made in the books of the Bank of England at the close of business.

Apart from the Town and General Clearings there are four other methods of settlement for special kinds of cheques:

- (a) the Branch Clearing, which deals with those cheques paid into one branch of a clearing bank and payable at another branch of the same bank;
- (b) cheques payable at branches or offices of banks in Scotland or Ireland;
- (c) 'Walks' items, consisting of cheques and drafts drawn on any bank or firm—other than a clearing bank—in the City or West End;
- (d) the Provincial Clearings, which deal with the settlement of cheques between banks in certain special towns.

The first type of cheque is still dealt with as it was before the war. Settlement between the branches of a clearing bank is made by a transfer between accounts in the books of the Head Office of the bank.

Generally speaking, cheques payable at branches or offices of banks in Scotland or Ireland are not dealt with as pre-war. It is now the practice to lodge Scottish cheques at the London office of the Scottish bank concerned and await payment, except in the case of banks with subsidiaries, e.g. Midland to Clydesdale, where settlement is made by means of the agency account. With Irish cheques, they are either lodged with a London agent and payment made on the agreed settlement date, or remitted to an agent or subsidiary in Ireland and settled through the agency account.

The 'Walks' collection consists of cheques drawn on the banks who are not members of the Clearing House and which have to be presented direct to them for payment. Before the war each of the clearing banks had a 'Walks' department where these items were sorted and sent round by messengers to the various offices involved, who made payment either by accepting the item payable with a

clearing bank with whom they kept an account, by cheque on such a bank or by bank transfer. This meant that each bank had to employ a number of staff simply to walk round the City delivering claims and collecting payments for them; hence the name. The various cheques and payments were then put into the clearing in the normal way.

As far as the 'Big Five' are concerned, this procedure is still carried out, but all the other clearing banks have now combined to form what is known as the 'Amalgamated Walks', which is administered by the Bank of England, with the assistance of one member from each of the banks concerned on a six-monthly rota. The procedure now is that each of the participating banks sorts and lists its own walks, but these are then taken to an office provided at the Bank of England, where they are amalgamated, and instead of some six or more clerks from each bank covering similar areas for their own bank only, one clerk from each bank deals with the amalgamated items for a particular area; an obvious saving of labour—and a modern reminder of the very way the Clearing House itself was started. All the various cheques, &c., received in payment are taken back to the Bank of England and passed by them through the Clearing House in their 'Out' charge in the Town Clearing the same afternoon. The accounts of the six respective clearing banks are credited direct by the Bank of England with the amounts due to them.

Finally there are the twelve provincial clearing houses which deal with the settlement of cheques between the clearing bank offices in their particular area. They are situated at Birmingham, Bristol, Leeds, Liverpool, Manchester, Newcastle-on-Tyne, Southampton, Bradford, Hull, Leicester, Nottingham, and Sheffield. In the first seven of these, the Bank of England has a branch, and the settlement of balances is effected through the accounts which each branch of the clearing bank keeps with the Bank of England branch. They are in fact miniature replicas of the London Clearing House. In the other five towns, where there is no branch of the Bank of England, the work of collating claims and establishing the amount of balances due is undertaken by one of the branches in the local clearing. Claims are sometimes settled by a transfer between local accounts but usually by issuing Bankers Payments or 'Agents Claim Vouchers' which are remitted to London and passed by the Head Office concerned through the Clearing.

The growth of the work involved in the clearing system has been spectacular. In 1938 the number of cheques and other payments handled in the London Bankers' Clearing House was 260 millions, totalling some £40,000 millions. In 1956 it was 376 million items involving a total turnover of £160,889 millions. And these figures, large as they are, do not represent the total amount transferred through the banking system as a whole, as they do not include the cheques settled through the provincial clearings—a total of £2,397 millions in 1956—or the banks' own internal clearings.

INDEX

- Acceptance Credit, 45.
- Acceptances, 44-47, 235, 244.
- Accepting Houses, 45-47, 50, 71, 80 n.
- Advances, *see under* Loans and Advances.
- Agricultural Mortgage Bank, 175.
- Agriculture, 179.
- Alexanders Discount Co. Ltd., 47 n.
- American Bankers' Association, 228.
- Argentina, 117, 127.
- Assets, 13-19, 33-41, 157-73, 188-99, 233.
- Australia:
 - bank structure in, 21, 118, 250.
 - central banking in, 75 n., 253, 263.
 - exchange rate, 262.
 - government securities in, 169.
 - London balances, 119, 129.
 - money-market in, 251.
- Authorized dealers, 128.
- Availability of credit, 139, 152, 153.
- Bagehot, W., 97, 220.
- Balance of payments, 123, 124, 133, 257-9.
- Baltimore, 227.
- Bank Acts, 66-69, 79, 93, 96.
- Bank of America, 226.
- Bank of Canada, 74, 251, 252 n., 255, 257 n.
- Bank of England:
 - Annual Report, 71-72.
 - 'back-door' operations, 100-6, 132, 206, 209, 210.
 - Banking Dept., 79-80, 93, 108 n.
 - banks' deposits with, *see under* Bankers' Deposits.
 - control of cash reserves, 80-91, 194-7.
 - customers, 78-80, 189.
 - and discount market, 49-50, 80, 98-104, 163.
 - and Exchange Equalization Acct., 129.
 - Governor, 205, 221, 279; *see also under* Norman, Lord.
 - Issue Dept., 54, 79, 93, 108 n., 111, 205.
 - lending to government, 79.
 - 'London balances' at, 119.
 - nationalization, 66-70, 275.
 - note issue, *see under* Bank Notes.
 - powers, 68-71, 183, 213 n.
 - Radcliffe Committee's description, 272.
 - structure, 66-67.
 - and Treasury Bills, 55, 78, 79.
- Bank of England Act 1946, 66-69, 213 n., 221.
- Bank deutscher Länder, 74.
- Bank of France, 73.
- Bankers' Clearing House, 27-29, 279-87.
- Bankers' Clearing House (Provincial), 279, 286.
- Bankers' Deposits, 18, 29, 78, 130, 285, 286.
- Bankers' Industrial Development Co., 175.
- Bank Notes, 9-11, 78-79, 81-88, 91-96, 186, 187, 253.
- Bank Rate:
 - and deposit rate, 198.
 - and discount market, 49, 99.
 - level of, 217.
 - and market-rate, 195-7.
 - in U.S.A., 242-7.
 - use of, 140.
- Banks (commercial):
 - business of, 22-23, 47, 157-68, 174, 175.
 - competition between, 223.
 - as creators of money, 12.
 - and discount market, 47-51.
 - importance of, 1-3.
 - objectives, 20, 158.
 - organization, 180, 181.
 - and Treasury bills, 55, 56, 206.
 - types, 20-22, 118.
- Barclays Bank, 21, 281, 283.
- Baring Bros. and Co., 47.
- Baster, A. S. J., 118 n.
- Belgium, 175.
- Bill-brokers, 47 n.
- Bill of Exchange:
 - abroad, 267 n.
 - acceptance of, 43-47, 50.
 - as bank asset, 35.

- Bill of Exchange (*cont.*):
 defined, 15, 42-43.
 discount of, 44, 47-52.
 'eligible', 50, 163.
 liquidity, 37, 164-7.
 volume, 62, 195.
 Bombay, 251.
 Boston, 227.
 Branch banking, 21, 23-26, 225-7,
 281.
 Branch managers, 26-27.
 Building Societies, 2, 152, 153.
 Burma, 250.
 Business deposits, 30.

 California, 245-7.
 Call Money, 35, 37, 48, 163, 169,
 188-90, 198.
 Canada:
 bank structure, 21, 250.
 central banking, 74, 251-3, 255,
 263.
 decline of bank lending, 178.
 money-market, 251.
 note-issue, 96.
 and sterling area, 126, 127.
 wartime aid from, 124.
 Canton, 251.
 Capital, 137, 147-52, 213, 271.
 Capital goods, 7, 203.
 Capital investment, control of, 214.
 Capital Issues Committee, 222.
 Cash:
 as bank asset, 17-18, 34-35, 159.
 defined, 17, 81-82, 188.
 and foreign exchange, 257.
 relation to deposits, 184-90.
 reserve, 23, 240, 253.
 in un-banked countries, 250.
 Cash Deposits, 30-32.
 Cash Ratio:
 compulsory variation, 261.
 defined, 34, 36.
 and financial crisis, 96.
 maintenance, 39-41, 83-87, 105,
 130-3, 199, 206-10, 261.
 present position, 193-7.
 in U.S.A., 240-2.
 Central Banks:
 bankers' balances with, 18, 78, 253.
 and banking liquidity, 161-4.
 competition with commercial banks,
 265.
 control of commercial banks, 39-
 41, 76-77, 253-63.
 foreign, 72-76, 252.
 and foreign exchange business, 77.
 and the State, 64-66.
 in the Sterling Area, 118, 119.
 Ceylon, 255 n.
 Chain banking (U.S.A.), 227.
 Chancellor of the Exchequer, 69-70,
 144, 205, 214, 221, 222, 269.
 Cheap money, 143, 203-15.
 Cheques, 3, 8-10, 28-29, 279-87.
 Chicago, 226, 235.
 China, 250.
 Clearing House balances, 94, 184.
 Clearing House Funds, 238.
 Coinage, 12, 17, 81, 86, 90-91.
 Commercial banks, *see under* Banks.
 Commercial paper, 235.
 Committee on Finance and Industry,
 269, 271.
 Committee of London Clearing Bank-
 ers, 277.
 Consols, 38 n., 143, 144, 205.
 Consumption, 4.
 Convertibility, 123, 127.
 Correspondent banks, 22, 24, 162, 228,
 229.
 Cotton industry, 171.
 Country Clearing, 279, 280.
 Coutts Bank, 279.
 Crick, W. F., 185 n.
 Currency and Bank Notes Act, 79,
 93.
 Currency Exchanges, 226 n.
 Current Accounts, 31, 32, 33.
 Customers, 26.

 Dallas, 227.
 Dalton, Hugh, 144, 192, 203-5.
 Debentures, 147.
 Demand deposits, 31, 32, 33, 241.
 Denmark, 117, 145.
 Deposit Accounts, 31, 33.
 Deposit Rate, 198.
 Deposits:
 and cash ratio, 39-41.
 creation, 12, 184, 185.
 liquidity, 3.
 as money, 2, 3, 8.
 transfer, 28-29.
 types, 30-32.

- Deposits (*cont.*):
 in U.S.A., 228-30.
 volume, 12, 33.
- Depressions, 25, 26.
- Discount, 15.
- Discount Houses:
 assets and liabilities, 188-90.
 and Bank of England, 49, 80, 98-102, 195-7.
 function, 47-52, 62, 194.
 and government bonds, 56-61.
 resources, 58.
- Discount Houses Association, 55, 71.
- Discount Market:
 function, 47.
 loans to, 48-50, 119.
 structure, 47.
 and Treasury Bills, 61-62.
- Discount Rate, 243-6.
- Disinflationary policy, 155.
- District Bank Ltd., 21, 279, 281.
- Dollar pool, 125.
- Dollars, 123-5, 127, 129-30.
- Economica*, 171 n., 185 n.
- Economic policy, 155, 156, 182, 245, 246, 262, 263, 270, 271.
- Economic Record*, 120 n.
- Erlangers Ltd., 47.
- Exchange control, 116, 125, 128.
- Exchange Equalization Account:
 operations, 129-33.
 and Treasury Bills, 54, 130-4.
- Exchange Rates, 123, 125-7, 256, 257, 261.
- Exchequer, *see under* Treasury.
- Exchequer Bonds, 56, 100.
- Executor and Trustee services, 22.
- Expatriate banks, 264.
- Exports, 222.
- Federal Deposit Insurance Corporation, 230.
- Federal Funds, 61, 235, 237, 238.
- Federal Open Market Committee, 244.
- Federal Reserve Bank of New York, 234-9, 244.
- Federal Reserve System:
 and bank reserves, 233.
 and bond market, 61.
 established, 220.
 open market operations, 244-7.
- powers, 221, 232, 233, 240-4, 247.
 structure, 72-73, 75.
- Fiduciary Issue, 79, 93-96.
- Film royalties, 113.
- Finance bills, 52.
- Financial crises, 96.
- Financial intermediary, 1.
- Fisher, I., 4 n.
- Foreign currencies, 128.
- France, 73, 128, 174.
- Funding, 215-17.
- General clearing, 280-7.
- Germany, 11, 74-75, 173.
- Gillett Bros. Discount Co. Ltd., 42 n.
- Glyn, Mills and Co., 279, 281.
- Gold:
 and central bank policy, 195, 256.
 and dollars, 125, 129.
 in international settlements, 129, 130.
 note issue against, 93.
 and sterling, 123.
- Gold certificates, 241 n.
- Gold Standard, 194, 257.
- Goldenweiser, E. A., 72 n.
- Government Departments, *see under* Public departments.
- Government receipts and payments, 90, 102, 110, 111, 199.
- Government securities:
 abroad, 169.
 as bank assets, 15, 38, 159-61, 188-90, 192, 193.
 and discount houses, 56-61.
 held by Bank of England, 79.
 liquidity of, 159-61.
 official management of, 110-12.
 and ordinary shares, 147.
 market demand for, 213-17.
- Groups of banks (U.S.A.), 227.
- Hawtrey, R. G. (Sir Ralph), 137, 220.
- Head office, 26-27, 281.
- Hire Purchase, *see under* Instalment Credit.
- Holtrop, M. W., 247 n., 277.
- Hot bill, 56.
- Imperial banks, 118.
- Income deposits, 30.
- Income tax, 214, 215.
- Incomes, 6, 7.
- India, 76, 119, 125, 169, 252, 267.

- Industry, 167, 171, 173.
 Inflation, 251, 263, 270.
 Instalment credit:
 and interest rates, 154, 155, 176.
 in U.K., 180, 222.
 in U.S.A., 220, 221, 231.
 Insurance companies, 2, 152, 231 n.
 Inter-bank relations, 16.
 Interest:
 on bills, 43, 44, 48.
 on call money, 48.
 'cost', 137-41.
 defined, 14.
 on deposits, 32.
 as income, 14, 15.
 international payments, 114.
 Interest rates:
 and capital appreciation, 214.
 control of, 106, 111, 112, 140.
 defined, 139, 183.
 influences on, 100, 104, 140-6, 183.
 and monetary policy, 183, 203, 262, 263.
 and stocks, 137-9.
 on term loans, 232.
 in World War II, 204.
 structure, 190 n., 201-18.
 International banks, 118.
 International Monetary Fund, 129, 257 n.
 Investment, 5, 35-36, 38.
 Investments (of banks), 189, 193, 210, 216, 217.
 Ireland, 285.

 Jacoby, N. H., and Saulnier, R. J., 178 n.
 Japan, 249.

 Kansas City, 227.
 Keynes, J. M. (Lord Keynes), 4 n., 178 n., 185 n., 220.
 Kleinwort Sons and Co., 47.
 Kock, M. H. de, 277.

 Lazard Bros. and Co., 47.
 Legal tender, 10-11, 81.
 Liabilities, 32-33, 189.
 Liquidity, 3 n., 23, 36-38, 158-71, 202, 210-12, 216, 217, 251, 273.
 Lloyds Bank Ltd., 21, 279, 281.

 Loans and Advances:
 abroad, 173, 174, 230-4.
 as bank asset, 189-93.
 creation of, 13-15, 35.
 decline, 177-81.
 liquidity, 38, 160, 165-8.
 restrictions on, 192, 221-4.
 London balances, 117-20, 123.

 Machlup, F., 171 n.
 Macmillan Committee, 269, 271.
 Market rate, 195-7, 205.
 Marshall, A., 4 n.
 Martins Bank Ltd., 21, 279.
 Metal market, 281.
 Metropolitan clearing, 279-81.
 Midland Bank Ltd., 279.
 Minneapolis, 227.
 Money:
 definition, 1, 3.
 forms of, 5-11.
 Money-market assets ratio, 131-4, 193, 197-200.
 Money-markets abroad, 234-9, 251, 252.
 Mortgages, 172, 232.

 National Bank Ltd., 279.
 National Debt, 110-12, 199, 212, 216, 247, 272, 274.
 National Debt Commissioners, 205.
 National Discount Co. Ltd., 47 n.
 National Provincial Bank Ltd., 21, 279, 281.
 Near-money, 11 n.
 Neufeld, E. P., 252 n.
 New York, 22, 219, 225-9, 233-5, 241, 244.
 New York money-market, 225, 234-5.
 New York State, 226, 227.
 New Zealand, 262.
 New Zealand, Reserve Bank of, 74.
 Norman, Lord, 65.

 Open-market operations, 88-91, 100, 112, 244-8.
 Ordinary Shares, 147, 160, 179.
 Output, 5, 7.
 Outside banks, 190.
 Overdrafts, 13.
 Overdraft rates, 197.
 Overseas banks, 264.

- Paish, F. W., 214.
 Pakistan, 126 n.
 Patinkin, D., 4 n.
 Peel, Sir Robert, 96.
 Philip, Kjeld, 145 n.
 Pittsburgh, 227.
 Plumptre, A. F. W., 252 n.
 Preference Shares, 147.
 Pressnell, L. S., 94 n.
 Prices, 3-7.
 Priorities, 222, 223.
 Privilege money, 48 n.
 Profits, 6, 148-50.
 Promissory notes, 235.
 Public departments, 54, 205-15.
 Public Deposits, 78, 90, 102, 110, 130-4, 259, 260.
 Public sector, 271.
 Public utilities, 146, 151, 178, 189, 231.

 Qualitative control, 218-24.
 Quantity Theory of Money, 2-6.

 Radcliffe Committee on the Working of the Monetary System, 37, 72, 112, 138, 156 n., 217 n., 247 n., 248, 269-78.
 Rangoon, 251.
 Rediscounting, 49-52, 245, 267.
 Reimbursement credit, 46.
 Remittance business, 24.
 Rentiers, 6.
 Repurchase agreements, 244.
Review of Economic Studies, 145 n.
 Riefler, W. W., 247 n., 277.
 Robertson, D. H. (Sir Dennis), 4 n., 171 n.
 Roosa, R. V., 235 n.
 Rothschild and Sons, 47.
 Royal Mint, 92-93.
 Rural Credit Banks, 175.

 Savings Banks, 54, 205.
 Savings Deposits, 30-32, 186.
 Scotland, 66 n., 96, 176, 188 n., 285.
 Securities Exchange Act, 221.
 Security, 172.
 Selective Control, 218-24, 240.
 Senior, N. W., 251 n.
 Shanghai, 251.
 Shares, 147, 160, 179.
 Shiftability, 161-3.
 Smith, Adam, 26.

 South Africa, 117, 251, 253, 267 n.
 South African Reserve Bank, 74.
 South America, 169, 250, 251.
 Statistics and monetary policy, 276.
 Sterling:
 convertibility, 123-7.
 in international payments, 115-17.
 Sterling Area:
 balance of payments, 132.
 exchange rates in, 125-7.
 payments within, 115-17.
 structure, 66 n., 117, 126-7.
 in World War II, 124.
 Sterling Balances, 117-20, 123-7.
 Stock Exchange, 111, 141, 220, 234, 255.
 Stocks, 137-8.
 Syndicate (discount market), 55 n.

 Taxation, 7 n.
 Term Loans, 231, 232.
 Tew, B., 120 n.
 Tight money, 139, 222.
 Time deposits, 31-32, 140-1, 229, 230.
The Times, 144.
 Thorneycroft, P., 269.
 Town clearing, 279-86.
 Trade Cycle, 25.
 Trading Desk, 244.
 Transamerica, 227.
 Travel expenditure, 113.
 Treasury:
 account at Bank of England, 78, 102.
 and note issue, 93.
 relations with Bank of England, 70-71, 128, 183, 221.
 and Budget policy, 263.
 Treasury Bills:
 as bank assets, 35, 42, 162, 163, 188.
 commercial holdings of, 140 n., 178.
 in cheap money operations, 206-12, 217.
 defined, 52-53.
 and discount market, 61-62.
 and Exchange Equalization Account, 54, 130-4.
 funding of, 215-17.
 issue, 54-56.
 in 'London balances', 119, 124.
 rates on, 204, 205.
 supply of, 192 n.
 in U.S.A., 236.

- Treasury Bills (*cont.*):
 tap issue, 54, 132.
 tender, 54-56.
- Treasury, Committee of (Bank of England), 67.
- Treasury Deposit Receipts, 37, 205.
- Treasury Notes, 11.
- Union Discount Co., 47 n.
- Unit banking, 21-25, 225-7.
- United States:
 bank assets and liabilities, 33, 164.
 bank failures, 25.
 bank structure, 21, 22, 27, 162, 174 n., 225-8, 239-40.
 banking business, 176, 228-34.
 bond market, 61.
 and Canada, 124.
 central banking, 72-73, 98.
 see also Federal Reserve System.
 decline of lending, 178.
 deposits, 31-33.
 financial crises, 220.
 instalment finance, 176.
 reserve requirements, 240-3.
 wartime aid, 124.
- United States Treasury, 235.
- Viner, J., 94 n.
- Wage-earners, 7.
- Walks, 280, 281, 285, 286.
- Walras, L., 157.
- War:
 1914-18, 42.
 1939-45, 2 n., 7 n., 124, 144, 204.
 Korean, 221.
- War Loan Conversion, 144.
- Washington, 225, 228, 244.
- Ways and Means Advances, 79.
- Westminster Bank Ltd., 21, 279, 281.
- Williams, Deacon's Bank, 279, 281.
- Window-dressing, 36, 193, 194, 207.
- Wood, E., 94 n.
- Yorkshire Penny Bank, 281.

PRINTED IN GREAT BRITAIN
AT THE UNIVERSITY PRESS, OXFORD
BY VIVIAN RIDLER
PRINTER TO THE UNIVERSITY

MUSSOORIE/मसूरी

7170

कृपया इस पुस्तक को निम्नलिखित दिनांक या उससे पहले वापस कर दें।

Please return this book on or before the date last stamped below.

[illegible]

552.1
Sax.
C-2
बर्ग संख्या
Class No. _____
लेखक
Author Saxena, R.S.
शीर्षक
Title Modern Banking.
अवाप्ति संख्या
Acc. No. 7170
पुस्तक संख्या
Book No. _____

332.1

Sax

C-2

LIBRARY
LAL BAHADUR SHASTRI
National Academy of Administration
MUSSOORIE

Accession No. 7170

1. Books are issued for 15 days only but may have to be recalled earlier if urgently required.
2. An over-due charge of 25 Paise per day per volume will be charged.
3. Books may be renewed on request, at the discretion of the Librarian.
4. Periodicals, Rare and Reference books may not be issued and may be consulted only in the Library.
5. Books lost, defaced or injured in any way shall have to be replaced or its double price shall be paid by the borrower.